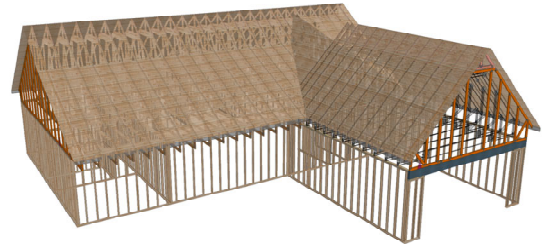




Carter Sanford Component Plant  
298 Harvey Faulk Rd  
Sanford, NC 27332

Phone #:919-775-1450



**Builder: Wellco Contractor**

**Model: 126 Hidden Lakes North - Wellco - Plan 9 GRH**

THE PLACEMENT PLAN NOTES:

1. The Placement Plan is a diagram for truss installation. It is not an engineered drawing and has not been reviewed by an engineer. The Owner/Building Designer is responsible for obtaining an engineer's review if one is required by the local jurisdiction.
2. The responsibilities of the Owner, Contractor, Building Designer, Component Designer and Component Manufacturer shall be as set forth in ANSI/TPI 1. Capitalized terms shall be as defined in ANSI/TP 1 unless otherwise indicated.
3. Each Component is designed as an individual component utilizing information provided by others. The Owner/Building Designer is responsible for reviewing all Component Submittal Packages and individual Component Design Drawings for compliance with the Construction Documents and compatibility with the overall Building design.
4. Contractor will not proceed with component installation until the Owner/Building Designer has reviewed the Component Submittal Package. Questions on the suitability of any Component will be resolved by the Building Designer.
5. The Building Designer and Contractor are responsible for all temporary and permanent bracing.
6. The Placement Plan assumes the building is dimensionally correct, structurally sound, and in a suitable condition to support each Component during installation and thereafter, including but not limited to installation of all bearing points. Proper design and construction of all structural components, including foundations, headers, beams, walls and columns are the responsibility of the Owner, Building Designer and Contractor.
7. Do not cut, drill, or modify any Component without first consulting the Component Manufacturer or Building Designer. Damaged Components shall not be installed unless directed by the Building Designer or approved by the Component Manufacturer.
8. Components must be handled and installed following all applicable safety standards and best practices, including but not limited to BCSI, OSHA, TPI and local codes. Failure to properly handle, brace or otherwise install Component can result in serious injury or death.
9. All uplift connectors shown within these documents are recommendations only. Per ANSI/TPI 1, all uplift connectors are the responsibility of the building designer and or contractor.

Approved By: \_\_\_\_\_

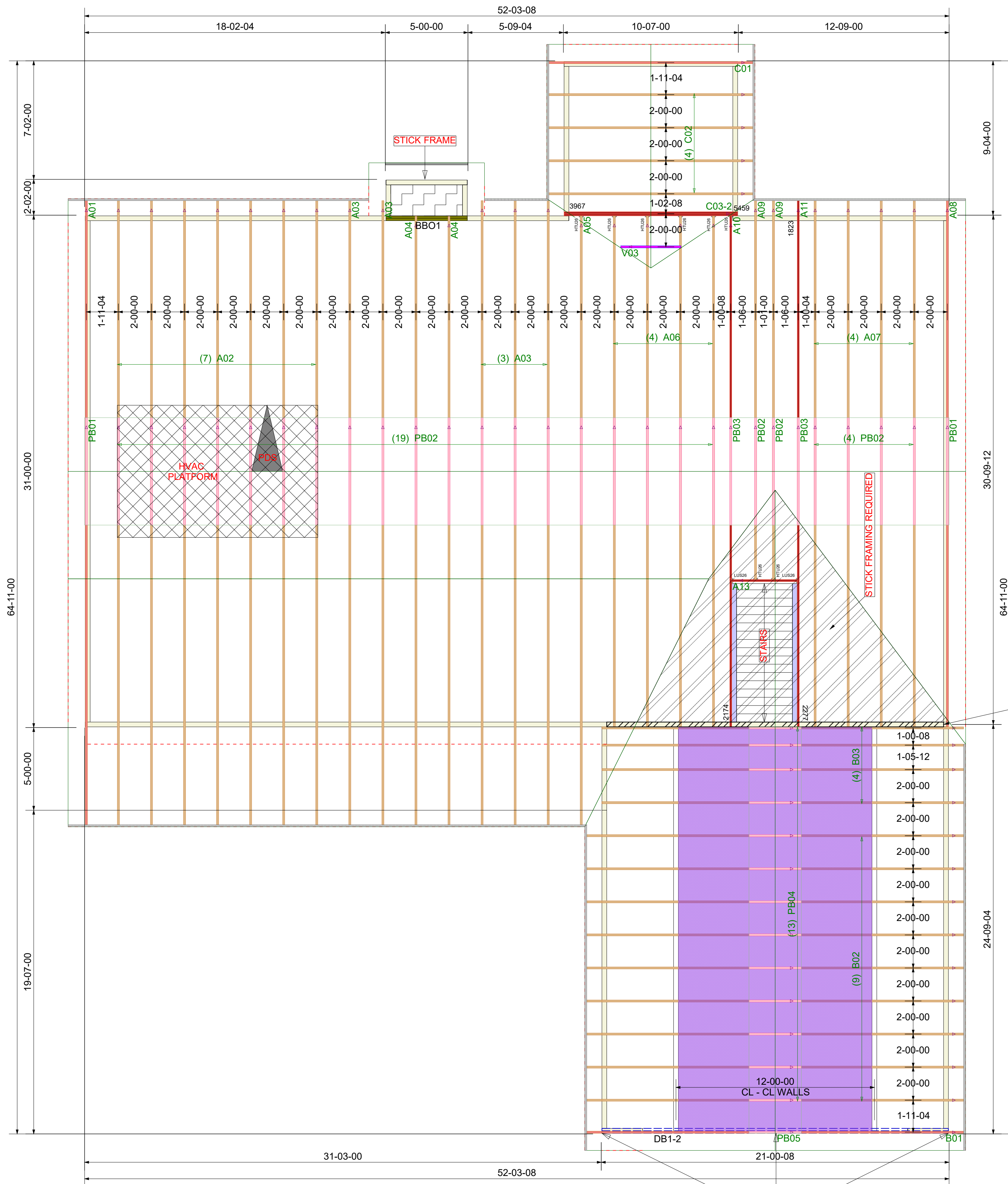
Date: \_\_\_\_\_

**General Notes:**

\*\* CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

\*\* ALL BEARING POINTS MUST BE INSTALLED PRIOR TO SETTING ANY COMPONENTS.

\*\* DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT. \*\* TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.



**KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.**

| PlotID | Length   | Product                           | Products | Piles | Net Qty | Fab Type |
|--------|----------|-----------------------------------|----------|-------|---------|----------|
| DB1-2  | 22-00-00 | 2.1 ReguLam SP LVL 1-3/4 x 11-7/8 | 2        | 2     |         | FF       |

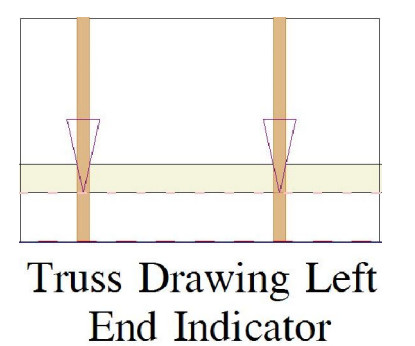
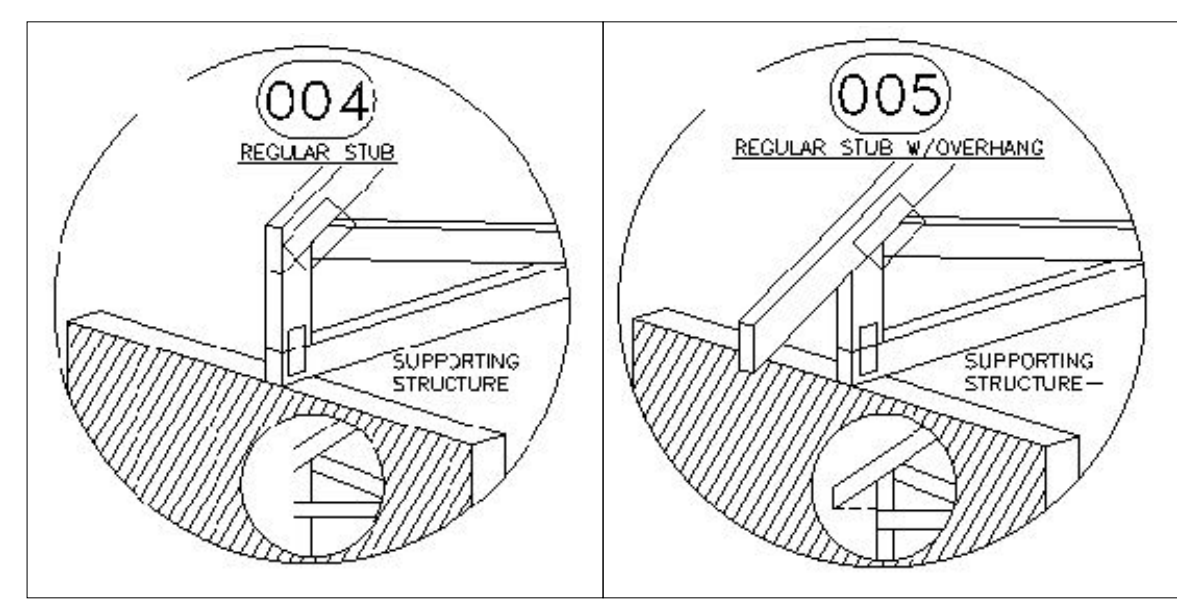
| Truss Connector Total List |           |     |
|----------------------------|-----------|-----|
| Manuf                      | Product   | Qty |
| Simpson                    | HTU26     | 8   |
| Simpson                    | LUS26     | 2   |
| Simpson                    | One H2.5A | 156 |

ALL TRUSSES USE ONE H2.5A UNLESS NOTED

BEARING WALL

**ALL GARAGE WALLS ARE 1' LOWER THAN THE MAIN WALLS OF THE HOUSE**

FB# - Flush Beam  
DB# - Dropped Beam  
BBO - Beam that is not supplied by the component plant



\*\* TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

\*\* PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

\*\* REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.

\*\* ALL UPLIFT CONNECTORS SHOWN WITHIN THESE DOCUMENTS ARE RECOMMENDATIONS ONLY. PER ANSII/TPI 1, ALL UPLIFT CONNECTORS ARE THE RESPONSIBILITY OF THE BLDG DESIGNER AND OR CONTRACTOR.

| Revisions |      |
|-----------|------|
| 00/00/00  | Name |
| 00/00/00  | Name |
| 00/00/00  | Name |
| 00/00/00  | Name |
| 00/00/00  | Name |

**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.** These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53179



Wellco Contractor  
126 Hidden Lakes  
North-Roof-Plan 9 GRH  
ROOF PLACEMENT PLAN

|                 |              |
|-----------------|--------------|
| Scale:          | NTS          |
| Date:           | 1/7/2025     |
| Designer:       | Aaron Rogers |
| Project Number: | 25010023-01  |
| Sheet Number:   | 1/1          |



Customer:  
Street 1:  
City:  
Customer Ph...

Job Name: **01**  
Level: **1st FLOOR**  
Label: **DB1-2 -**  
Type: **Beam**

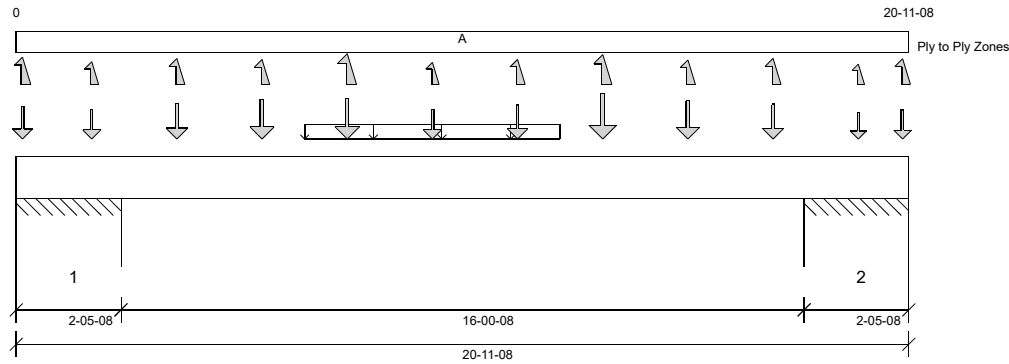
**2 Ply Member**  
**2.1 RigidLam SP LVL 1-3/4**  
**x 11-7/8**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.7.3.303.Update13.26

Report Version: 2023.09.18 01/06/2025 14:20



**DESIGN INFORMATION a**

Building Code: IRC 2021  
Design Methodology: ASD  
Risk Category: II (General Construction) Residential  
Service Condition: Dry  
System Spacing: -  
LL Deflection Limit: L/360, 0.75" (absolute)  
TL Deflection Limit: L/240, 1.00" (absolute)

**Lateral Restraint Requirements:**

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 20'- 11 1/2" Bottom: 20'- 11 1/2"

**Bearing Stress of Support Material:**

- 725 psi Wall @ 0'- 1 1/2"
- 725 psi Wall @ 2'- 4"
- 725 psi Wall @ 18'- 7 1/2"
- 725 psi Wall @ 20'- 10"

**ANALYSIS RESULTS**

| Design Criteria             | Location    | Load Combination        | LDF  | Design     | Limit       | Result         |
|-----------------------------|-------------|-------------------------|------|------------|-------------|----------------|
| Max Pos. Moment:            | 9'- 9 1/4"  | D + 0.75(L + Lr + 0.6W) | 1.60 | 1753 lb ft | 18351 lb ft | Passed - 10%   |
| Max Neg. Moment:            | 18'- 7 1/2" | D + 0.75(L + Lr + 0.6W) | 1.60 | 2785 lb ft | 18351 lb ft | Passed - 15%   |
| Max Shear:                  | 17'- 6 1/8" | D + 0.75(L + Lr)        | 1.15 | 907 lb     | 9241 lb     | Passed - 10%   |
| Live Load (LL) Pos. Defl.:  | 10'- 4 7/8" | 0.75(L + Lr + 0.6W)     |      | 0.038"     | L/360       | Passed - L/999 |
| Total Load (TL) Pos. Defl.: | 10'- 6 1/4" | D + 0.75(L + Lr + 0.6W) |      | 0.060"     | L/240       | Passed - L/999 |

**SUPPORT AND REACTION INFORMATION**

| ID | Input Bearing Length | Controlling Load Combination | LDF  | Downward Reaction | Uplift Reaction | Resistance of Member | Resistance of Support | Result      |
|----|----------------------|------------------------------|------|-------------------|-----------------|----------------------|-----------------------|-------------|
| 1  | 9-00                 | 0.6D + 0.6W                  | 1.60 | 120 lb            |                 | 32870 lb             | 22838 lb              | Passed - 1% |
| 1  | 9-00                 | D + 0.75(L + Lr)             | 1.15 |                   | -1043 lb        | -                    | -                     |             |
| 1  | 1-06-00              | D + 0.75(L + Lr + 0.6W)      | 1.60 | 2413 lb           |                 | 47250 lb             | 45675 lb              | Passed - 5% |
| 1  | 1-06-00              | 0.6D + 0.6W                  | 1.60 |                   | -428 lb         | -                    | -                     |             |
| 2  | 1-06-00              | D + 0.75(L + Lr + 0.6W)      | 1.60 | 2420 lb           |                 | 47250 lb             | 45675 lb              | Passed - 5% |
| 2  | 1-06-00              | 0.6D + 0.6W                  | 1.60 |                   | -427 lb         | -                    | -                     |             |
| 2  | 9-00                 | 0.6D + 0.6W                  | 1.60 | 123 lb            |                 | 32870 lb             | 22838 lb              | Passed - 1% |
| 2  | 9-00                 | D + 0.75(L + Lr)             | 1.15 |                   | -1049 lb        | -                    | -                     |             |

**LOADING**

| Type        | Start Loc   | End Loc      | Source        | Face | Dead (D) | Live (L) | Snow (S) | Roof Live (Lr) | Wind (W)   |
|-------------|-------------|--------------|---------------|------|----------|----------|----------|----------------|------------|
| Self Weight | 0'          | 20'- 11 1/2" | Self Weight   | Top  | 11 lb/ft | -        | -        | -              | -          |
| Uniform     | 6'- 9 1/4"  | 12'- 9 1/4"  | Smoothed Load | Top  | -        | 41 lb/ft | -        | -              | -          |
| Point       | 0'- 1 3/4"  | 0'- 1 3/4"   | B01(c01)      | Top  | 57 lb    | 6 lb     | 47 lb    | 94/-3 lb       | 53/-187 lb |
| Point       | 1'- 9 1/4"  | 1'- 9 1/4"   | B01(c01)      | Top  | 69 lb    | -7 lb    | 34 lb    | 79 lb          | 38/-124 lb |
| Point       | 3'- 9 1/4"  | 3'- 9 1/4"   | B01(c01)      | Top  | 84 lb    | 16/-5 lb | 46 lb    | 94 lb          | 52/-167 lb |
| Point       | 5'- 9 1/4"  | 5'- 9 1/4"   | B01(c01)      | Top  | 88 lb    | 75 lb    | 44 lb    | 93/-2 lb       | 48/-158 lb |
| Point       | 7'- 9 1/4"  | 7'- 9 1/4"   | B01(c01)      | Top  | 99 lb    | -        | 54 lb    | 145/-34 lb     | 60/-200 lb |
| Point       | 9'- 9 1/4"  | 9'- 9 1/4"   | B01(c01)      | Top  | 79 lb    | -        | 33 lb    | 79/-2 lb       | 27/-120 lb |
| Point       | 11'- 9 1/4" | 11'- 9 1/4"  | B01(c01)      | Top  | 86 lb    | -        | 40 lb    | 103/-13 lb     | 40/-148 lb |
| Point       | 13'- 9 1/4" | 13'- 9 1/4"  | B01(c01)      | Top  | 98 lb    | 81 lb    | 53 lb    | 137/-29 lb     | 58/-194 lb |
| Point       | 15'- 9 1/4" | 15'- 9 1/4"  | B01(c01)      | Top  | 86 lb    | 61 lb    | 43 lb    | 92 lb          | 48/-154 lb |
| Point       | 17'- 9 1/4" | 17'- 9 1/4"  | B01(c01)      | Top  | 84 lb    | 5/-5 lb  | 46 lb    | 94 lb          | 52/-169 lb |
| Point       | 19'- 9 1/4" | 19'- 9 1/4"  | B01(c01)      | Top  | 57 lb    | -6 lb    | 27 lb    | 64 lb          | 27/-94 lb  |
| Point       | 20'- 9 3/4" | 20'- 9 3/4"  | B01(c01)      | Top  | 44 lb    | 7 lb     | 39 lb    | 78/-4 lb       | 47/-165 lb |

**UNFACTORED REACTIONS**

| ID  | Start Loc   | End Loc      | Source   | Dead (D)     | Live (L)    | Snow (S)    | Roof Live (Lr) | Wind (W)        |
|-----|-------------|--------------|----------|--------------|-------------|-------------|----------------|-----------------|
| 1   | 0'          | 2'- 5 1/2"   | E17(i26) | 1000/-419 lb | 582/-346 lb | 401/-147 lb | 1071/-593 lb   | 396 lb/-1094 lb |
| ==> | 0'- 1 1/2"  | 0'- 1 1/2"   | E17(i26) | -419 lb      | 6/-333 lb   | -147 lb     | 119/-494 lb    | -               |
| ==> | 2'- 4"      | 2'- 4"       | E17(i26) | 1000 lb      | 576/-13 lb  | 401 lb      | 952/-99 lb     | -               |
| 2   | 18'- 6"     | 20'- 11 1/2" | E12(i3)  | 1006/-426 lb | 581/-343 lb | 405/-153 lb | 1075/-600 lb   | 396 lb/-1094 lb |
| ==> | 18'- 7 1/2" | 18'- 7 1/2"  | E12(i3)  | 1006 lb      | 574/-10 lb  | 405 lb      | 965/-102 lb    | -               |
| ==> | 20'- 10"    | 20'- 10"     | E12(i3)  | -426 lb      | 7/-333 lb   | -153 lb     | 110/-498 lb    | -               |

**DESIGN NOTES**

- CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Customer:  
Street 1:  
City:  
Customer Ph...

Job Name: **01**  
Level: **1st FLOOR**  
Label: **DB1-2 -**  
Type: **Beam**

**2 Ply Member**  
**2.1 RigidLam SP LVL 1-3/4**  
**x 11-7/8**

Status:  
**Design**  
**Passed**

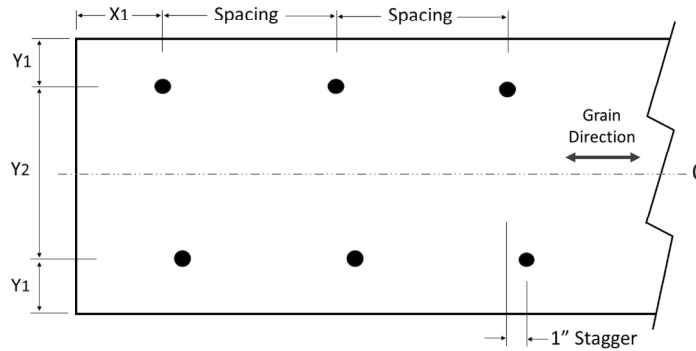
### DESIGN NOTES

- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.54

### PLY TO PLY CONNECTION

- Zone A: Factored load = 0 plf. Use 12d (0.148"x3.25") nails. LDF = 1.00. Qty = 42. Row = 2, Spacing = 12"  
12d (0.148"x3.25") nails properties: D = 0.148" , L = 3.25". Fastener capacity = 128 lbs. X1 = 2.25" , Y1 = 0.75" , Y2 = 1.5"  
Install fasteners from one face.  
X1 = Minimum end distance, X2 = Minimum edge distance, Y2 = Minimum row spacing.

#### FASTENER INSTALLATION – 2 ROWS (FROM ONE FACE)



Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 25010023-01  
126 Hidden Lakes North-Roof-Plan 9 GRH

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I70597118 thru I70597141

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844



January 8, 2025

Gilbert, Eric

**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

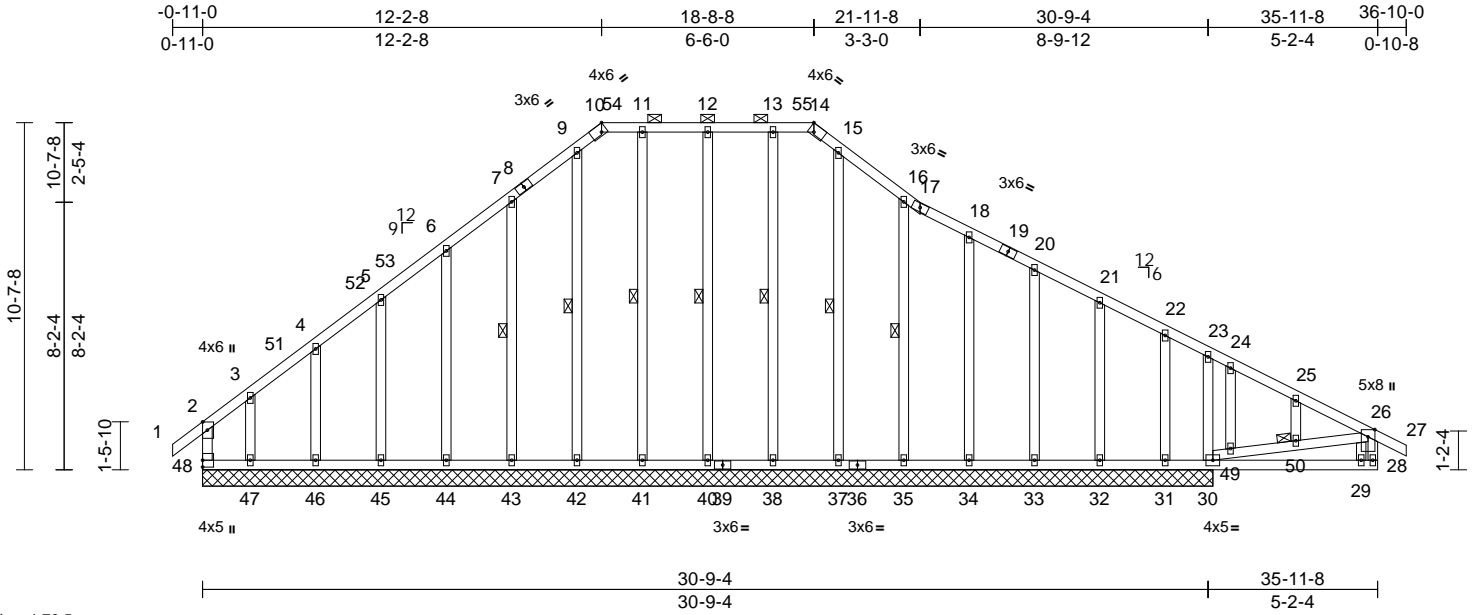
|                    |              |  |          |          |  |           |
|--------------------|--------------|--|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A01 | Truss Type<br>Piggyback Base Supported Gable | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597118 |
|--------------------|--------------|--|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1

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Scale = 1:70.5

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [10:0-2-2,Edge], [14:Edge,0-2-13]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI        | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|-----|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.88 | Vert(LL) | n/a   | -      | n/a | 999    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.39 | Vert(CT) | n/a   | -      | n/a | 999    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.26 | Horz(CT) | 0.02  | 30     | n/a | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |     |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |     |        |                |          |
|             |       |                 |                 |            |      |          |       |        |     |        | Weight: 295 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3 \*Except\* 38-13,40-12,41-11:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 9-3-2 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 10-14.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 13-38, 15-37, 16-35, 12-40, 11-41, 9-42, 7-43  
JOINTS 1 Brace at Jt(s): 50

**REACTIONS** (size)  
30=30-11-0, 31=30-11-0,  
32=30-11-0, 33=30-11-0,  
34=30-11-0, 35=30-11-0,  
37=30-11-0, 38=30-11-0,  
40=30-11-0, 41=30-11-0,  
42=30-11-0, 43=30-11-0,  
44=30-11-0, 45=30-11-0,  
46=30-11-0, 47=30-11-0,  
48=30-11-0  
Max Horiz 48=275 (LC 12)  
Max Uplift 30=91 (LC 11), 31=182 (LC 30),  
32=40 (LC 15), 33=42 (LC 15),  
34=47 (LC 15), 35=111 (LC 15),  
38=5 (LC 11), 40=51 (LC 10),  
41=8 (LC 11), 43=86 (LC 14),  
44=60 (LC 14), 45=71 (LC 14),  
46=40 (LC 14), 47=236 (LC 14),  
48=560 (LC 25)

Max Grav 30=676 (LC 49), 31=87 (LC 11),  
32=237 (LC 49), 33=187 (LC 49),  
34=181 (LC 49), 35=147 (LC 57),  
37=323 (LC 22), 38=316 (LC 22),  
40=195 (LC 42), 41=320 (LC 22),  
42=314 (LC 1), 43=211 (LC 46),  
44=227 (LC 46), 45=210 (LC 55),  
46=138 (LC 62), 47=595 (LC 25),  
48=276 (LC 11)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-48=-214/370, 1-2=0/37, 2-3=-354/576,  
3-4=-178/435, 4-5=-108/433, 5-6=-61/412,  
6-7=-41/399, 7-9=-75/429, 9-10=-78/299,  
10-11=-72/317, 11-12=-72/317,  
12-13=-72/317, 13-14=-72/317,  
14-15=-78/298, 15-16=-75/419,  
16-17=-28/375, 17-18=-39/364,  
18-20=-48/375, 20-21=-91/376,  
21-22=-139/385, 22-23=-137/297,  
23-24=-219/428, 24-25=-239/399,  
25-26=-269/351, 26-27=0/28, 26-28=-61/99  
BOT CHORD 47-48=-306/359, 46-47=-306/359,  
45-46=-306/359, 44-45=-306/359,  
43-44=-306/359, 42-43=-306/359,  
41-42=-306/359, 40-41=-306/359,  
38-40=-306/359, 37-38=-306/359,  
35-37=-306/359, 34-35=-306/359,  
33-34=-306/359, 32-33=-306/359,  
31-32=-306/359, 30-31=-306/359,  
29-30=-23/37, 28-29=-41/49

**WEBS** 13-38=-277/28, 15-37=-285/58,  
16-35=-131/150, 18-34=-140/72,  
20-33=-155/73, 21-32=-174/86,  
22-31=-27/73, 24-49=-23/57, 25-50=-59/42,  
26-29=-119/148, 12-40=-158/76,  
11-41=-281/31, 9-42=-275/18, 7-43=-177/115,  
6-44=-190/97, 5-45=-164/101, 4-46=-117/92,  
3-47=-332/279, 23-30=-384/177,  
30-49=-306/346, 49-50=-313/344,  
26-50=-306/339

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.



January 8, 2025

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road  
Edenton, NC 27932

|             |       |                                |     |     |  |
|-------------|-------|--------------------------------|-----|-----|--|
| Job         | Truss | Truss Type                     | Qty | Ply | 126 Hidden Lakes North-Roof-Plan 9 GRH |
| 25010023-01 | A01   | Piggyback Base Supported Gable | 1   | 1   | I70597118                              |
|             |       |                                |     |     | Job Reference (optional)               |

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 2

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- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-8-2, Exterior(2N) 2-8-2 to 8-7-6, Corner(3R) 8-7-6 to 18-8-8, Corner(3E) 18-8-8 to 21-11-8, Exterior(2N) 21-11-8 to 33-2-14, Corner(3E) 33-2-14 to 36-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) T CLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 560 lb uplift at joint 48.
- 14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 38, 35, 34, 33, 32, 31, 40, 41, 43, 44, 45, 46, 47, and 30. This connection is for uplift only and does not consider lateral forces.
- 15) Non Standard bearing condition. Review required.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



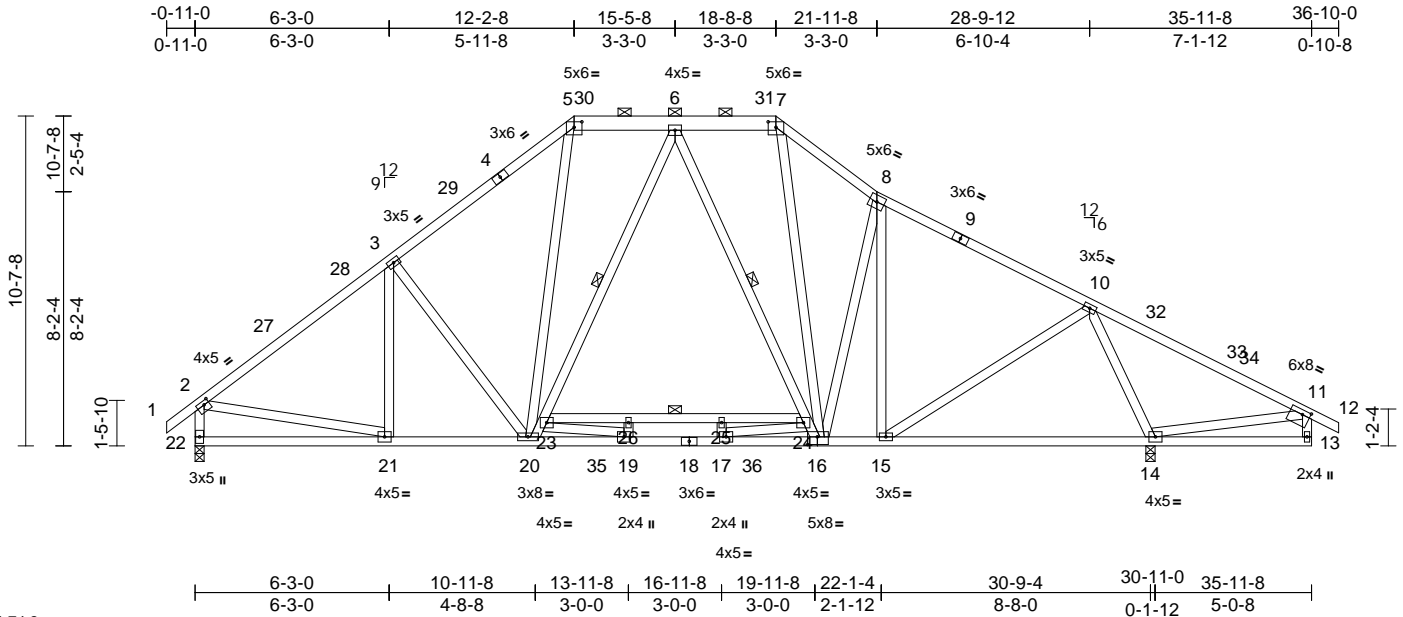
818 Soundside Road  
Edenton, NC 27932

|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A02 | Truss Type<br>Piggyback Base | Qty<br>7 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597119 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:49  
ID:1ayK79nSd2o4qxKJSSuafdyz8RO-RfC?PsB70Hq3NSgPqnlL8w3uITXbGKwCrD0i7J4zJC?f

Page: 1



Scale = 1:74.2

Plate Offsets (X, Y): [2:0-2-0,0-1-8], [5:0-3-0,0-2-2], [7:0-3-0,0-2-2], [11:0-3-0,0-1-12], [16:0-3-12,0-3-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.93 | Vert(LL) | -0.11 | 14-15  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.61 | Vert(CT) | -0.24 | 14-15  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.87 | Horz(CT) | 0.04  | 14     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 287 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 5-7:2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
20-6,6-16,16-7,20-5:2x4 SP No.2

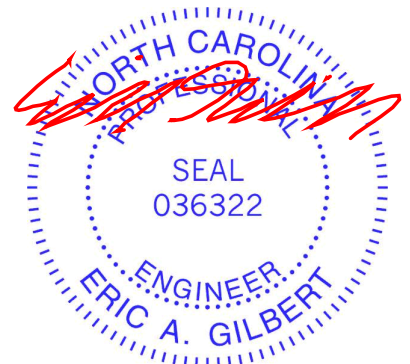
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 6-20, 6-16, 23-24

**REACTIONS** (size) 14=0-3-8, 22=0-3-8  
Max Horiz 22=282 (LC 12)  
Max Uplift 14=71 (LC 15)  
Max Grav 14=1907 (LC 47), 22=1451 (LC 43)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/38, 2-3=-1651/66, 3-5=-1496/133,  
5-6=-1038/178, 6-7=-963/138,  
7-8=-1343/136, 8-10=-1251/44,  
10-11=-237/569, 11-12=0/27,  
2-22=-1388/115, 11-13=-55/58  
BOT CHORD 21-22=-176/360, 20-21=7/1242,  
19-20=0/1098, 17-19=0/1451, 15-17=0/1109,  
14-15=0/409, 13-14=-94/192  
WEBS 3-21=-129/64, 8-15=-317/92, 10-15=-4/808,  
10-14=-1800/265, 2-21=0/1143,  
11-14=-593/394, 20-23=-344/109,  
6-23=-180/211, 6-24=-263/139,  
16-24=-419/39, 7-16=0/562, 5-20=0/493,  
3-20=-371/219, 8-16=-260/182,  
23-26=-673/0, 25-26=-672/0, 24-25=-673/0,  
17-25=0/50, 17-24=0/577, 19-26=0/42,  
19-23=0/576

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-8-2, Interior (1) 2-8-2 to 8-7-6, Exterior(2R) 8-7-6 to 18-8-8, Exterior(2E) 18-8-8 to 21-11-8, Interior (1) 21-11-8 to 33-2-14, Exterior(2E) 33-2-14 to 36-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 200.0lb AC unit load placed on the bottom chord, 15-5-8 from left end, supported at two points, 5-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- All plates are 4x5 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**  
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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932

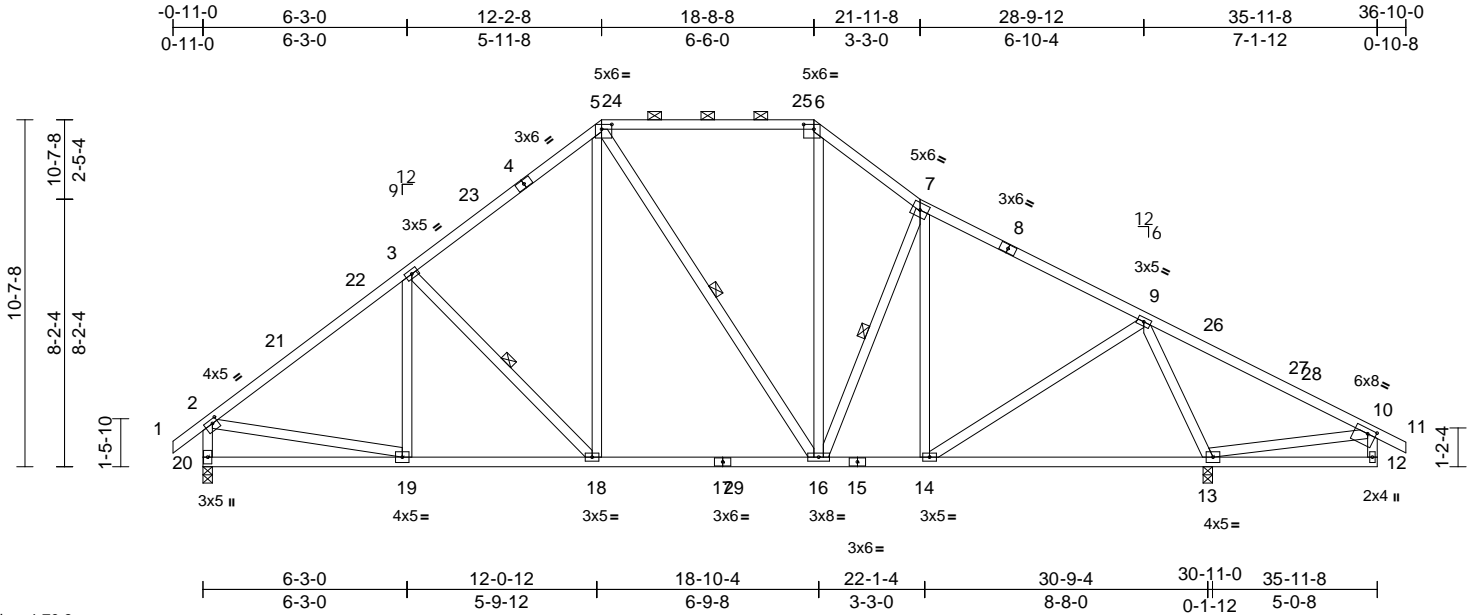


|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A03 | Truss Type<br>Piggyback Base | Qty<br>5 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597120 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:49  
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Page: 1



Scale = 1:70.6  
Plate Offsets (X, Y): [2:0-2-0,0-1-8], [5:0-3-12,0-1-12], [6:0-3-12,0-1-12], [10:0-3-0,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.93 | Vert(LL) | -0.13 | 13-14  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.61 | Vert(CT) | -0.26 | 13-14  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.83 | Horz(CT) | 0.03  | 13     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 247 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 5-6:2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 16-5:2x4 SP No.2

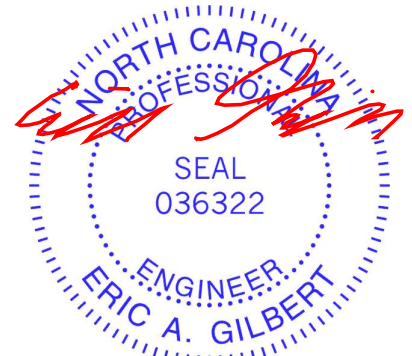
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-9 max.): 5-6.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 3-18, 5-16, 7-16

**REACTIONS** (size) 13=0-3-8, 20=0-3-8  
Max Horiz 20=283 (LC 12)  
Max Uplift 13=-171 (LC 15), 20=-100 (LC 14)  
Max Grav 13=1909 (LC 39), 20=1425 (LC 51)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/38, 2-3=-1791/195, 3-5=-1556/266, 5-6=-1069/252, 6-7=-1406/273, 7-9=-1355/169, 9-10=-237/569, 10-11=0/27, 2-20=-1477/213, 10-12=-56/56  
BOT CHORD 19-20=-179/357, 18-19=-112/1364, 16-18=0/1059, 14-16=0/1105, 13-14=0/428, 12-13=-95/191  
WEBS 3-19=-95/103, 3-18=-452/199, 5-18=-62/602, 5-16=-213/83, 6-16=-59/541, 7-16=-290/157, 7-14=-272/137, 9-14=-85/820, 9-13=-1799/376, 2-19=-14/1198, 10-13=-591/394

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-8-2, Interior (1) 2-8-2 to 8-7-6, Exterior(2R) 8-7-6 to 18-8-8, Exterior(2E) 18-8-8 to 21-11-8, Interior (1) 21-11-8 to 33-2-14, Exterior(2E) 33-2-14 to 36-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 20 and 13. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

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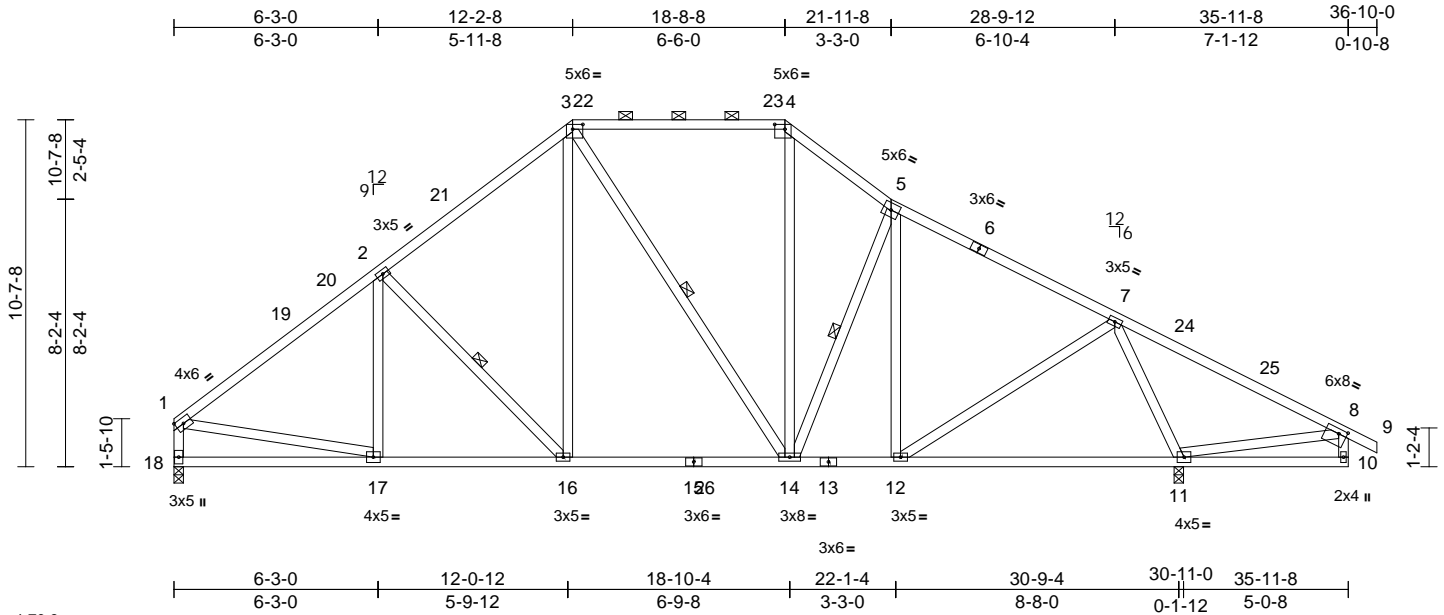
818 Soundside Road  
Edenton, NC 27932

|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A04 | Truss Type<br>Piggyback Base | Qty<br>2 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597121 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:49  
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Page: 1



Scale = 1:70.6  
Plate Offsets (X, Y): [3:0-3-12,0-1-12], [4:0-3-12,0-1-12], [8:0-3-0,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.92 | Vert(LL) | -0.13 | 11-12  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.61 | Vert(CT) | -0.26 | 11-12  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.83 | Horz(CT) | 0.03  | 11     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 245 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 14-3:2x4 SP No.2

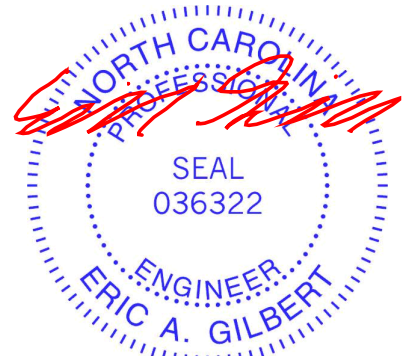
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-8 max.): 3-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 2-16, 3-14, 5-14

**REACTIONS** (size)  
11=0-3-8, 18=0-3-8  
Max Horiz 18=277 (LC 10)  
Max Uplift 11=170 (LC 15), 18=79 (LC 14)  
Max Grav 11=1910 (LC 39), 18=1371 (LC 51)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1791/194, 2-3=-1560/269, 3-4=-1070/253, 4-5=-1407/274, 5-7=-1357/170, 7-8=-237/559, 8-9=0/27, 1-18=-1431/169, 8-10=-56/56  
BOT CHORD 17-18=-141/331, 16-17=-112/1370, 14-16=0/1060, 12-14=0/1106, 11-12=0/429, 10-11=-95/183  
WEBS 2-17=-99/100, 2-16=-458/200, 3-16=-63/607, 3-14=-214/83, 4-14=-58/540, 5-14=-289/157, 5-12=-272/137, 7-12=-85/820, 7-11=-1800/377, 1-17=-54/1230, 8-11=-576/394

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-8-14, Interior (1) 3-8-14 to 8-7-6, Exterior(2R) 8-7-6 to 18-8-8, Exterior(2E) 18-8-8 to 21-11-8, Interior (1) 21-11-8 to 33-2-14, Exterior(2E) 33-2-14 to 36-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 18 and 11. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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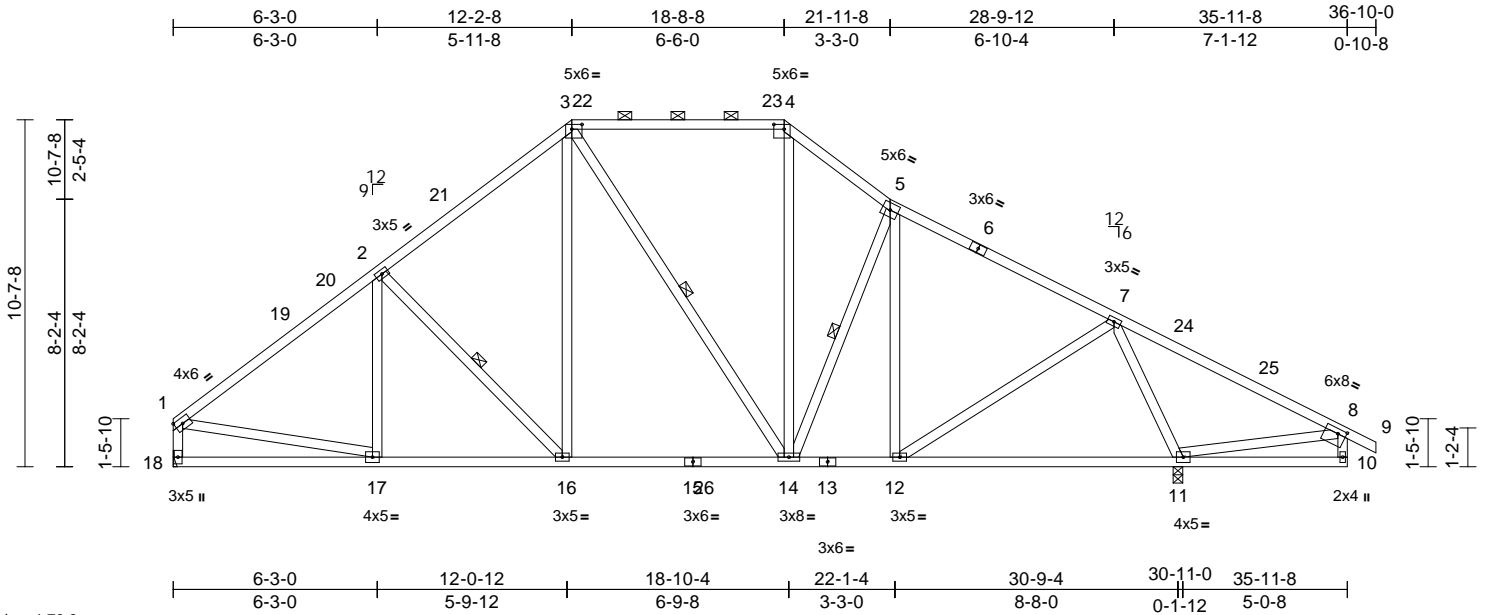
818 Soundside Road  
Edenton, NC 27932

|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A05 | Truss Type<br>Piggyback Base | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597122 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:49  
ID:D4q2B3iviLiGJ9dcJ7NzNzy8Cp-RfC?PsB70Hq3NSgPqnL8w3uITxbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:70.6

Plate Offsets (X, Y): [3:0-3-12,0-1-12], [4:0-3-12,0-1-12], [8:0-3-0,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.92 | Vert(LL) | -0.13 | 11-12  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.61 | Vert(CT) | -0.26 | 11-12  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.83 | Horz(CT) | 0.03  | 11     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 245 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x4 SP No.1  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 14-3:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-8 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 2-16, 3-14, 5-14

**REACTIONS** (size) 11=0-3-8, 18= Mechanical  
 Max Horiz 18=277 (LC 10)  
 Max Uplift 11=170 (LC 15), 18=79 (LC 14)  
 Max Grav 11=1910 (LC 39), 18=1371 (LC 51)

**FORCES** (lb) - Maximum Compression/Maximum Tension

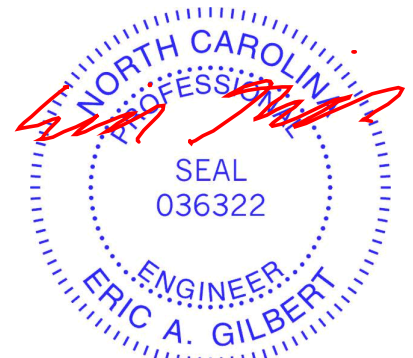
TOP CHORD 1-2=-1791/194, 2-3=-1560/269,  
 3-4=-1070/253, 4-5=-1407/274,  
 5-7=-1357/170, 7-8=-237/559, 8-9=0/27,  
 1-18=-1431/169, 8-10=-56/56  
 BOT CHORD 17-18=-141/331, 16-17=-112/1370,  
 14-16=0/1060, 12-14=0/1106, 11-12=0/429,  
 10-11=-95/183  
 WEBS 2-17=-99/100, 2-16=-458/200, 3-16=-63/607,  
 3-14=-214/83, 4-14=-58/540, 5-14=-289/157,  
 5-12=-272/137, 7-12=-85/820,  
 7-11=-1800/376, 1-17=-54/1230,  
 8-11=-576/394

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-8-14, Interior (1) 3-8-14 to 8-7-6, Exterior(2R) 8-7-6 to 18-8-8, Exterior(2E) 18-8-8 to 21-11-8, Interior (1) 21-11-8 to 33-2-14, Exterior(2E) 33-2-14 to 36-10-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 79 lb uplift at joint 18.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(11). This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



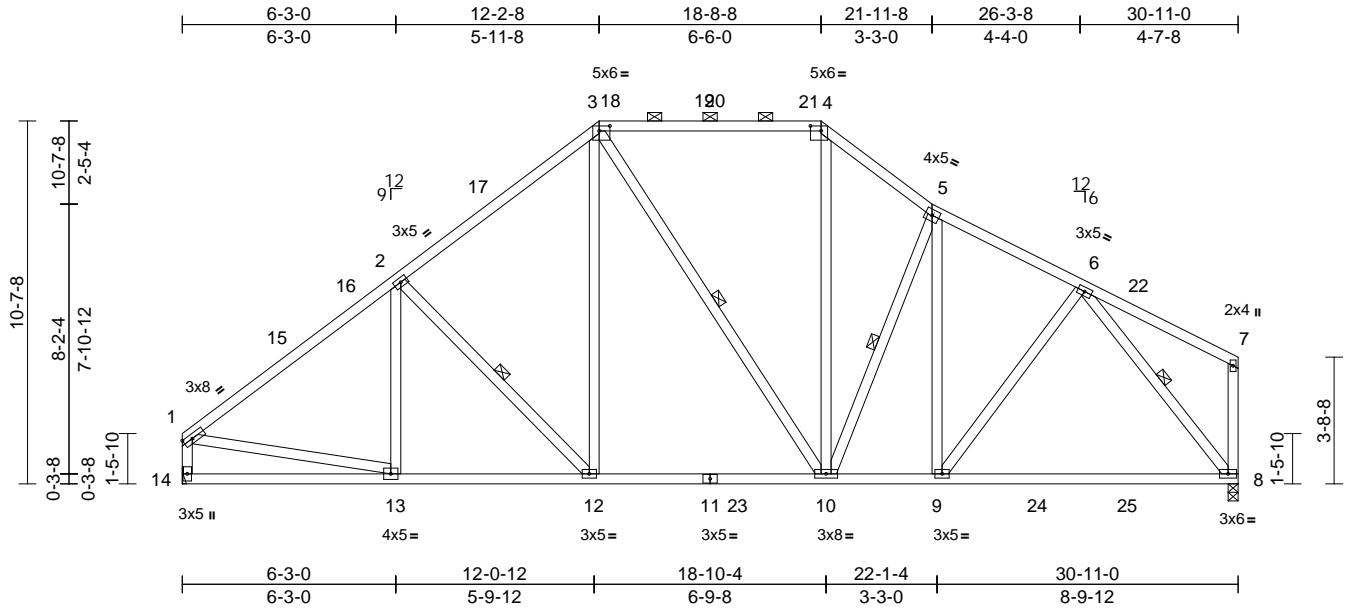
818 Soundside Road  
Edenton, NC 27932

|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A06 | Truss Type<br>Piggyback Base | Qty<br>4 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597123 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:50  
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Page: 1



Scale = 1:67.5

Plate Offsets (X, Y): [3:0-3-12,0-1-12], [4:0-3-12,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.86 | Vert(LL) | -0.25 | 8-9    | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.88 | Vert(CT) | -0.42 | 8-9    | >874 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.48 | Horz(CT) | 0.04  | 8      | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 226 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x4 SP No.1  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-4-5 max.): 3-4.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 2-12, 5-10, 6-8, 3-10

**REACTIONS**

(size) 8=0-3-8, 14= Mechanical  
 Max Horiz 14=260 (LC 10)  
 Max Uplift 8=-87 (LC 15), 14=-78 (LC 14)  
 Max Grav 8=1421 (LC 38), 14=1406 (LC 50)

**FORCES**

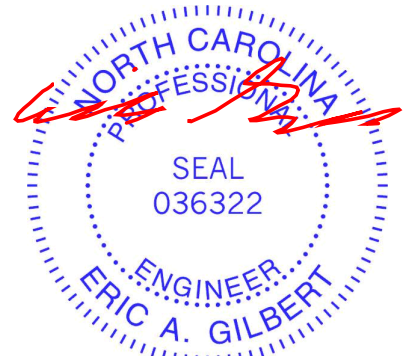
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-1825/221, 2-3=-1601/300, 3-4=-1141/296, 4-5=-1465/325, 5-6=-1465/258, 6-7=-134/119, 1-14=-1457/189, 7-8=-162/91  
 BOT CHORD 13-14=-217/315, 12-13=-126/1472, 10-12=-62/1167, 9-10=-18/1294, 8-9=-84/1049  
 WEBS 2-13=-105/94, 2-12=-450/201, 3-12=-62/604, 4-10=-58/568, 5-9=-147/73, 5-10=-402/141, 6-9=0/463, 1-13=-77/1259, 6-8=-1577/140, 3-10=-175/112

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-2-14, Interior (1) 3-2-14 to 9-1-6, Exterior(2R) 9-1-6 to 15-3-10, Interior (1) 15-3-10 to 15-7-6, Exterior(2R) 15-7-6 to 18-8-8, Exterior (2E) 18-8-8 to 21-11-8, Interior (1) 21-11-8 to 27-8-2, Exterior(2E) 27-8-2 to 30-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 14.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



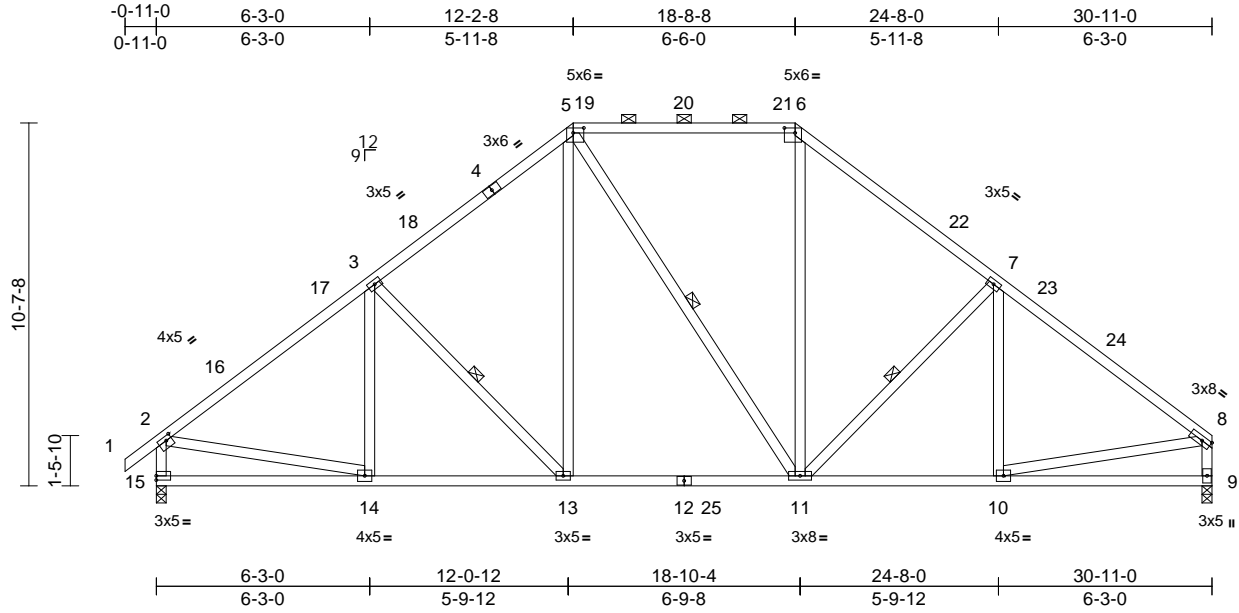
818 Soundside Road  
Edenton, NC 27932

|                    |              |                              |          |          |  |           |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A07 | Truss Type<br>Piggyback Base | Qty<br>4 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597124 |
|--------------------|--------------|------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:50  
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Page: 1



Scale = 1:67.5

Plate Offsets (X, Y): [2:0-2:0,0-1-8], [5:0-3-12,0-1-12], [6:0-3-12,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.88 | Vert(LL) | -0.12 | 11-13  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.61 | Vert(CT) | -0.20 | 11-13  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.50 | Horz(CT) | 0.04  | 9      | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 211 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2 \*Except\* 5-6:2x4 SP No.1  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 11-5:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-15 max.): 5-6.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-13, 5-11, 7-11

**REACTIONS** (size) 9=0-3-8, 15=0-3-8  
 Max Horiz 15=269 (LC 11)  
 Max Uplift 9=-107 (LC 15), 15=-127 (LC 14)  
 Max Grav 9=1442 (LC 47), 15=1503 (LC 47)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-0/38, 2-3=-1889/154, 3-5=-1666/228,  
 5-6=-1216/238, 6-7=-1659/232,  
 7-8=-1876/156, 2-15=-1552/160,  
 8-9=-1501/140

BOT CHORD 14-15=-269/342, 13-14=-149/1449,  
 11-13=-65/1152, 10-11=-43/1444,  
 9-10=-44/151

WEBS 3-14=-113/100, 3-13=-439/191,  
 5-13=-60/585, 5-11=-154/156, 6-11=-41/552,  
 7-11=-447/193, 7-10=-118/97, 2-14=-20/1279,  
 8-10=-13/1329

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-2-2, Interior (1) 2-2-2 to 7-10-1, Exterior(2R) 7-10-1 to 23-0-15, Interior (1) 23-0-15 to 27-8-2, Exterior(2E) 27-8-2 to 30-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 9. This connection is for uplift only and does not consider lateral forces.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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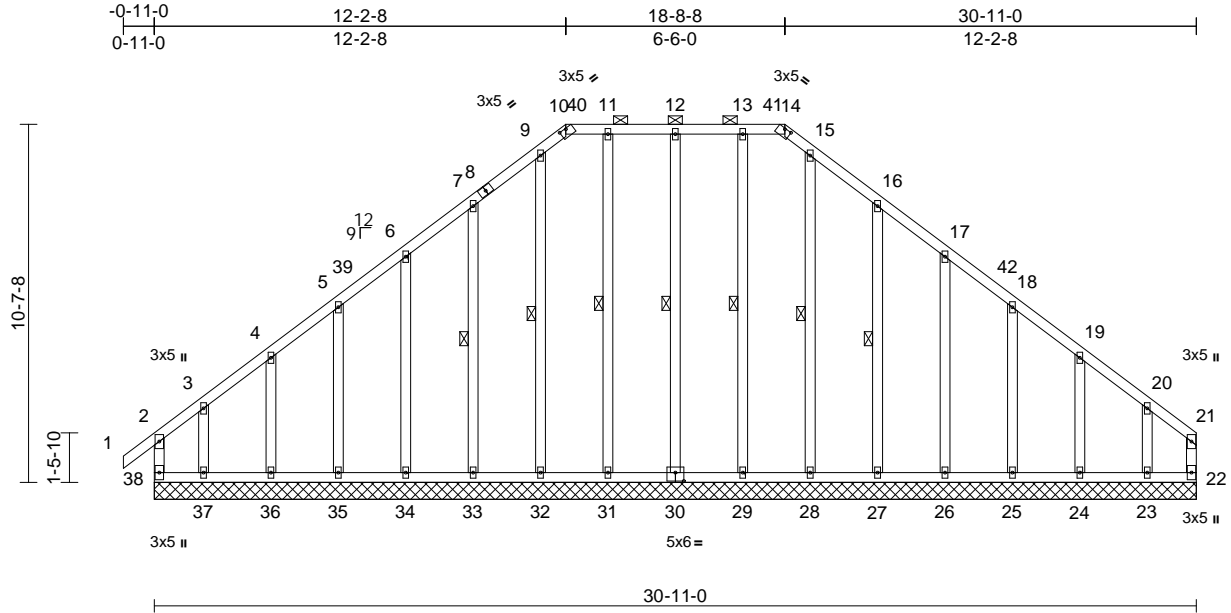
818 Soundside Road  
 Edenton, NC 27932

|                    |              |  |          |          |  |           |
|--------------------|--------------|--|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A08 | Truss Type<br>Piggyback Base Supported Gable | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | I70597125 |
|--------------------|--------------|--|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:50  
ID:fiQa4PBX9\_sD5tDkVtQnzy88n-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:68.4

Plate Offsets (X, Y): [10:0-2-8,0-0-5], [14:0-2-8,0-0-5], [30:0-3-0,0-3-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.28 | Vert(LL) | n/a   | -      | n/a | 999    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.15 | Vert(CT) | n/a   | -      | n/a | 999    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.17 | Horz(CT) | -0.01 | 22     | n/a | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MR |      |          |       |        |     |        |                |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     |        |                |          |
|             |       |                 |                 |           |      |          |       |        |     |        | Weight: 254 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3 \*Except\* 30-12,31-11,29-13:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 10-14.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 12-30, 11-31, 9-32, 7-33, 13-29, 15-28, 16-27

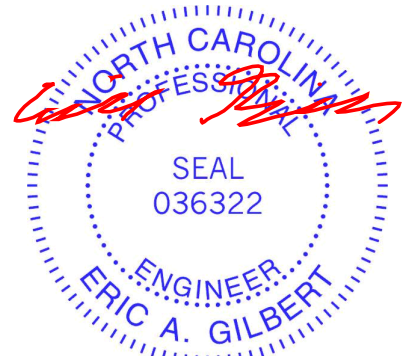
**REACTIONS** (size)  
22=30-11-0, 23=30-11-0,  
24=30-11-0, 25=30-11-0,  
26=30-11-0, 27=30-11-0,  
28=30-11-0, 29=30-11-0,  
30=30-11-0, 31=30-11-0,  
32=30-11-0, 33=30-11-0,  
34=30-11-0, 35=30-11-0,  
36=30-11-0, 37=30-11-0,  
38=30-11-0  
Max Horiz 38=269 (LC 11)  
Max Uplift 22=163 (LC 13), 23=178 (LC 15),  
24=51 (LC 15), 25=71 (LC 15),  
26=62 (LC 15), 27=92 (LC 15),  
30=41 (LC 10), 31=3 (LC 11),  
33=91 (LC 14), 34=62 (LC 14),  
35=72 (LC 14), 36=47 (LC 14),  
37=208 (LC 11), 38=206 (LC 10)

Max Grav 22=196 (LC 10), 23=259 (LC 53),  
24=165 (LC 22), 25=200 (LC 53),  
26=233 (LC 41), 27=234 (LC 41),  
28=205 (LC 55), 29=222 (LC 40),  
30=233 (LC 40), 31=222 (LC 40),  
32=210 (LC 57), 33=234 (LC 41),  
34=233 (LC 41), 35=200 (LC 51),  
36=169 (LC 21), 37=276 (LC 12),  
38=276 (LC 31)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-38=-206/146, 1-2=0/38, 2-3=-207/195,  
3-4=-137/141, 4-5=-125/149, 5-6=-116/188,  
6-7=-135/242, 7-9=-175/323, 9-10=-161/280,  
10-11=-151/289, 11-12=-151/289,  
12-13=-151/289, 13-14=-151/289,  
14-15=-161/280, 15-16=-175/323,  
16-17=-135/242, 17-18=-107/180,  
18-19=-91/133, 19-20=-103/103,  
20-21=-151/151, 21-22=-124/104  
BOT CHORD 37-38=-123/122, 36-37=-123/122,  
35-36=-123/122, 34-35=-123/122,  
33-34=-123/122, 32-33=-123/122,  
31-32=-123/122, 29-31=-123/122,  
28-29=-123/122, 27-28=-123/122,  
26-27=-123/122, 25-26=-123/122,  
24-25=-123/122, 23-24=-123/122,  
22-23=-123/122  
WEBS 12-30=-202/90, 11-31=-182/27,  
9-32=-170/12, 7-33=-214/115, 6-34=-199/87,  
5-35=-173/93, 4-36=-150/86, 3-37=-160/150,  
13-29=-182/24, 15-28=-165/0,  
16-27=-214/116, 17-26=-199/87,  
18-25=-173/92, 19-24=-150/86,  
20-23=-165/136

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-2-2, Exterior(2N) 2-2-2 to 9-1-6, Corner(3R) 9-1-6 to 21-9-10, Exterior(2N) 21-9-10 to 27-5-8, Corner(3E) 27-5-8 to 30-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.



January 8, 2025

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road  
Edenton, NC 27932

|             |       |                                |     |     |  |
|-------------|-------|--------------------------------|-----|-----|--|
| Job         | Truss | Truss Type                     | Qty | Ply | 126 Hidden Lakes North-Roof-Plan 9 GRH |
| 25010023-01 | A08   | Piggyback Base Supported Gable | 1   | 1   | I70597125<br>Job Reference (optional)  |

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 2

- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 7) Provide adequate drainage to prevent water ponding.
- 8) All plates are 2x4 MT20 unless otherwise indicated.
- 9) Gable requires continuous bottom chord bearing.
- 10) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 11) Gable studs spaced at 2-0-0 oc.
- 12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 13) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 206 lb uplift at joint 38, 163 lb uplift at joint 22, 41 lb uplift at joint 30, 3 lb uplift at joint 31, 91 lb uplift at joint 33, 62 lb uplift at joint 34, 72 lb uplift at joint 35, 47 lb uplift at joint 36, 208 lb uplift at joint 37, 92 lb uplift at joint 27, 62 lb uplift at joint 26, 71 lb uplift at joint 25, 51 lb uplift at joint 24 and 178 lb uplift at joint 23.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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Edenton, NC 27932



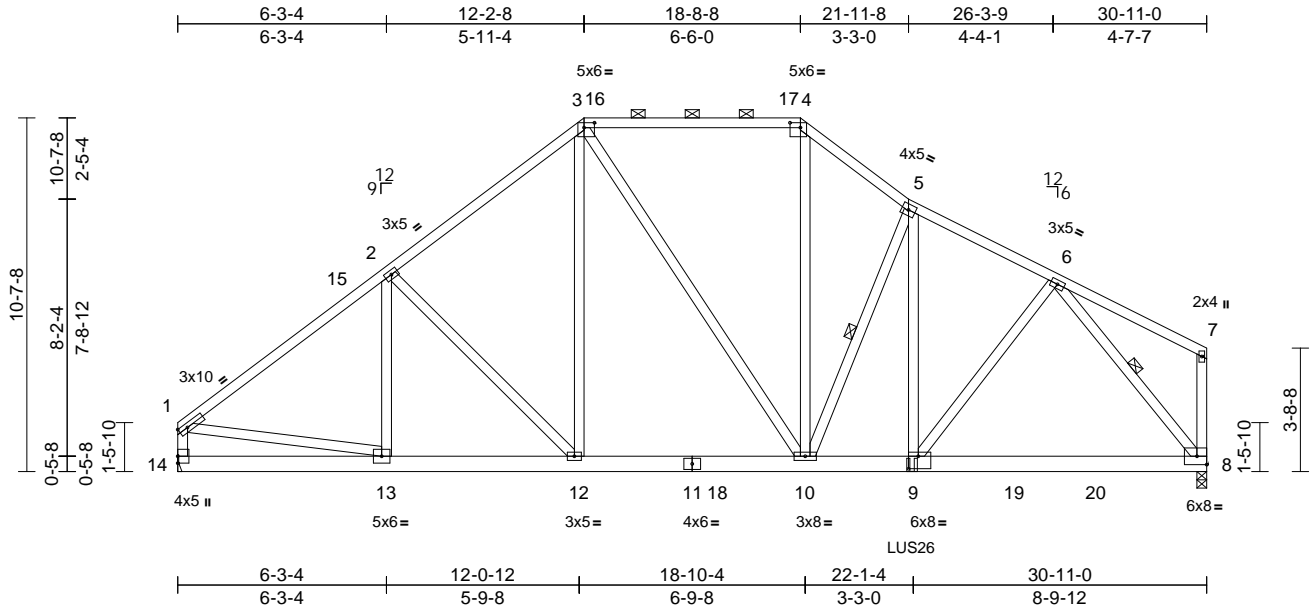


|                    |              |                                     |          |          |  |           |
|--------------------|--------------|-------------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A10 | Truss Type<br>Piggyback Base Girder | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597127 |
|--------------------|--------------|-------------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:69.2

Plate Offsets (X, Y): [3:0-3-12,0-1-12], [4:0-3-12,0-1-12], [9:0-3-8,0-4-8]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.87 | Vert(LL) | -0.10 | 8-9    | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.63 | Vert(CT) | -0.18 | 8-9    | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | NO              | WB         | 0.75 | Horz(CT) | 0.04  | 8      | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 250 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x4 SP 2400F 2.0E  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-7-1 max.): 3-4.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
WEBS 1 Row at midpt 5-10, 6-8

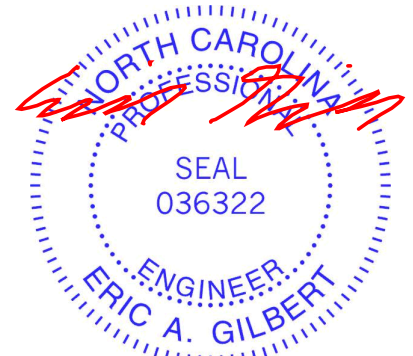
**REACTIONS** (size) 8=0-3-8, 14= Mechanical  
Max Horiz 14=257 (LC 8)  
Max Uplift 8=375 (LC 13), 14=192 (LC 12)  
Max Grav 8=2174 (LC 34), 14=1721 (LC 48)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-2055/262, 2-3=-1866/335, 3-4=-1562/382, 4-5=-2001/438, 5-6=-2279/480, 6-7=-125/71, 1-14=-1607/221, 7-8=-165/52  
BOT CHORD 13-14=-223/344, 12-13=-246/1734, 10-12=-193/1443, 9-10=-332/2021, 8-9=-309/1513  
WEBS 3-12=-84/564, 4-10=-210/1007, 5-10=-1233/420, 5-9=-269/804, 1-13=-81/1467, 6-8=-2383/461, 3-10=-264/457, 2-12=-398/229, 2-13=-159/93, 6-9=-128/917

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 14.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent at 22-0-12 from the left end to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-60, 3-4=-60, 4-5=-60, 5-7=-60, 8-14=-20  
Concentrated Loads (lb)  
Vert: 9=-1010 (B)



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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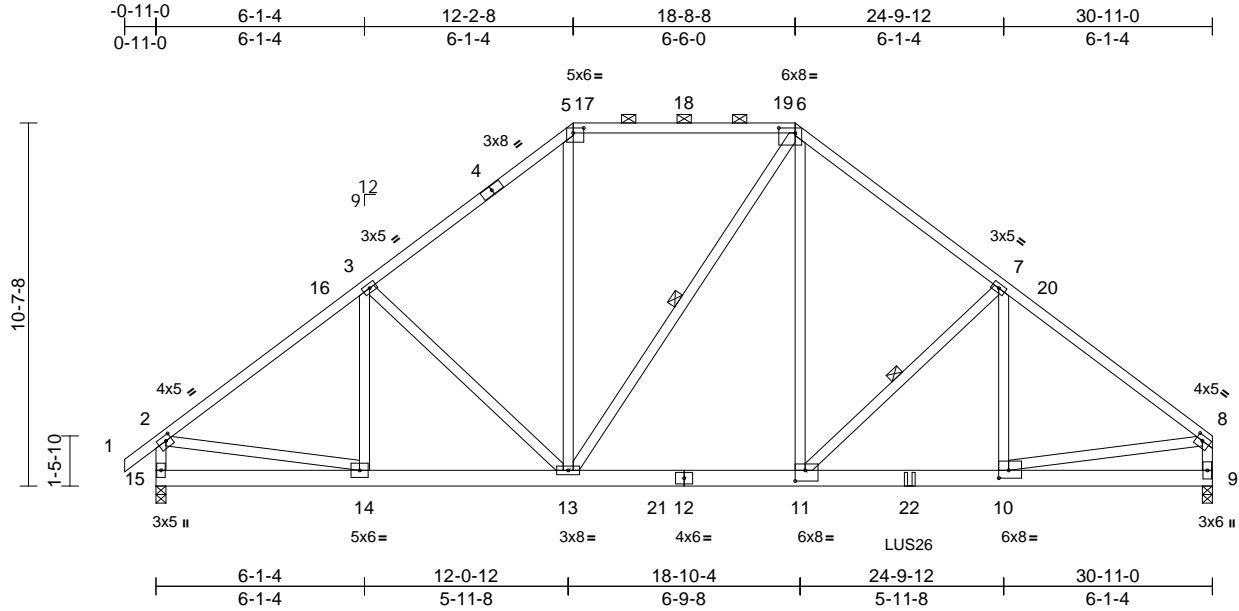
818 Soundside Road  
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|                    |              |                                     |          |          |  |           |
|--------------------|--------------|-------------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A11 | Truss Type<br>Piggyback Base Girder | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597128 |
|--------------------|--------------|-------------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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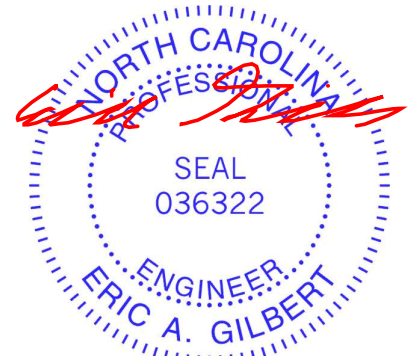


Scale = 1:67.4

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [5:0-3-12,0-1-12], [6:0-5-12,0-1-12], [8:0-2-4,0-1-12], [10:0-3-8,0-2-12], [11:0-3-8,0-3-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.86 | Vert(LL) | -0.14 | 10-11  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.74 | Vert(CT) | -0.25 | 10-11  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | NO              | WB         | 0.88 | Horz(CT) | 0.03  | 9      | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 235 lb | FT = 20% |

- LUMBER**
- TOP CHORD 2x4 SP No.1 \*Except\* 5-6:2x4 SP 2400F 2.0E
- BOT CHORD 2x6 SP 2400F 2.0E
- WEBS 2x4 SP No.3 \*Except\* 6-13:2x4 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
- BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
- WEBS 1 Row at midpt 6-13, 7-11
- REACTIONS** (size) 9=0-3-8, 15=0-3-8  
Max Horiz 15=266 (LC 11)  
Max Uplift 9=-395 (LC 13), 15=-242 (LC 12)  
Max Grav 9=2277 (LC 47), 15=1823 (LC 45)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/38, 2-3=-2111/305, 3-5=-1912/371, 5-6=-1397/354, 6-7=-2258/493, 7-8=-2900/567, 2-15=-1714/270, 8-9=-2258/454
- BOT CHORD 14-15=-275/366, 13-14=-274/1775, 11-13=-220/1705, 10-11=-379/2243, 9-10=-65/114
- WEBS 5-13=-136/823, 6-11=-370/1510, 2-14=-92/1507, 8-10=-343/2196, 6-13=-604/293, 3-13=-398/210, 3-14=-161/88, 7-11=-875/339, 7-10=-144/574
- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 9. This connection is for uplift only and does not consider lateral forces.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent at 22-0-12 from the left end to connect truss(es) to front face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-60, 2-5=-60, 5-6=-60, 6-8=-60, 9-15=-20  
Concentrated Loads (lb)  
Vert: 22=-1010 (F)



January 8, 2025

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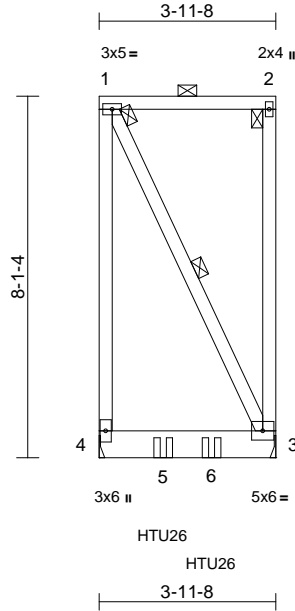
818 Soundside Road  
Edenton, NC 27932

|                    |              |                           |          |          |  |           |
|--------------------|--------------|---------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>A13 | Truss Type<br>Flat Girder | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597129 |
|--------------------|--------------|---------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:51.6

| Loading     | (psf) | Spacing         |                 | CSI       |      | DEFL     | in    | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.78 | Vert(LL) | -0.02 | 3-4   | >999   | 240 | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.44 | Vert(CT) | -0.03 | 3-4   | >999   | 180 |               |          |
| TCDL        | 10.0  | Rep Stress Incr | NO              | WB        | 0.11 | Horz(CT) | 0.00  | 3     | n/a    | n/a |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |       |       |        |     |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |       |        |     | Weight: 51 lb | FT = 20% |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x8 SP 2400F 2.0E  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD 2-0-0 oc purlins: 1-2, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 1-3

**REACTIONS** (size) 3= Mechanical, 4= Mechanical  
Max Horiz 4=-255 (LC 10)  
Max Uplift 3=-390 (LC 9), 4=-390 (LC 8)  
Max Grav 3=1216 (LC 21), 4=1216 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-4=-255/310, 1-2=-95/72, 2-3=-107/44  
BOT CHORD 3-4=-222/199  
WEBS 1-3=-295/295

#### NOTES

- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 390 lb uplift at joint 4 and 390 lb uplift at joint 3.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 1-1-0 oc max. starting at 1-5-4 from the left end to 2-6-4 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-58, 3-4=-19  
Concentrated Loads (lb)  
Vert: 5=-887 (B), 6=-887 (B)



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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ENGINEERING BY  
**TRENCO**  
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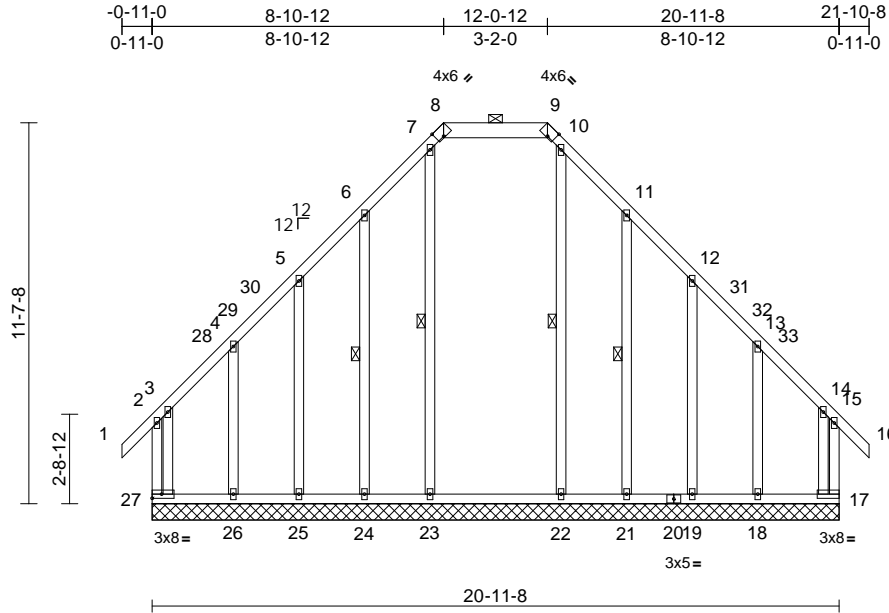
818 Soundside Road  
Edenton, NC 27932

|                    |              |  |          |          |  |           |
|--------------------|--------------|--|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>B01 | Truss Type<br>Piggyback Base Supported Gable | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597130 |
|--------------------|--------------|--|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:51  
ID:h0vtb3ypMmfY4nq8HIFWhzy8Xc-RfC?PsB70Hq3NSgPqnL8w3uITXhGKwRCDoi7J4zJC?F

Page: 1



Scale = 1:70.3

Plate Offsets (X, Y): [8:0-2-8,Edge], [9:0-2-8,Edge]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.44 | Vert(LL) | n/a   | -      | n/a | 999    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.19 | Vert(CT) | n/a   | -      | n/a | 999    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.20 | Horz(CT) | -0.01 | 17     | n/a | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MR |      |          |       |        |     |        |                |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     |        |                |          |
|             |       |                 |                 |           |      |          |       |        |     |        | Weight: 186 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 8-9:2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3 \*Except\* 23-7,22-10:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-9.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 7-23, 6-24, 10-22, 11-21

**REACTIONS** (size)  
17=20-11-8, 18=20-11-8, 19=20-11-8, 21=20-11-8, 22=20-11-8, 23=20-11-8, 24=20-11-8, 25=20-11-8, 26=20-11-8, 27=20-11-8  
Max Horiz 27=307 (LC 12)  
Max Uplift 17=242 (LC 11), 18=263 (LC 10), 19=55 (LC 15), 21=140 (LC 15), 24=141 (LC 14), 25=54 (LC 14), 26=271 (LC 11), 27=252 (LC 10)  
Max Grav 17=339 (LC 25), 18=414 (LC 53), 19=250 (LC 51), 21=249 (LC 53), 22=424 (LC 54), 23=425 (LC 56), 24=249 (LC 51), 25=251 (LC 53), 26=420 (LC 51), 27=348 (LC 26)

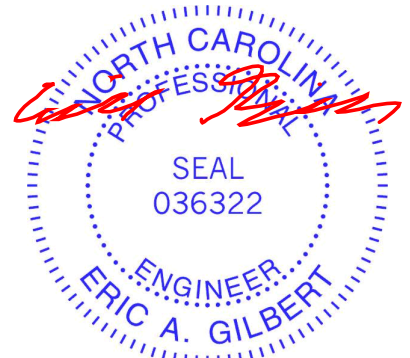
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-27=-474/421, 1-2=0/44, 2-3=-299/283, 3-4=-243/251, 4-5=-118/270, 5-6=-158/376, 6-7=-210/504, 7-8=-201/301, 8-9=-161/386, 9-10=-201/301, 10-11=-210/504, 11-12=-161/373, 12-13=-105/287, 13-14=-234/242, 14-15=-291/327, 15-16=0/44, 15-17=-461/424

**BOT CHORD** 26-27=-159/150, 25-26=-159/150, 24-25=-159/150, 23-24=-159/150, 22-23=-159/150, 21-22=-159/150, 19-21=-159/150, 18-19=-159/150, 17-18=-159/150  
**WEBS** 7-23=-294/36, 6-24=-226/160, 5-25=-201/127, 4-26=-284/227, 3-27=-646/617, 10-22=-295/33, 11-21=-222/165, 12-19=-222/98, 13-18=-279/222, 14-17=-624/596

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-1-0, Exterior(2N) 2-1-0 to 5-10-12, Corner(3R) 5-10-12 to 15-0-12, Exterior(2N) 15-0-12 to 18-10-8, Corner(3E) 18-10-8 to 21-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.

- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 252 lb uplift at joint 27, 242 lb uplift at joint 17, 141 lb uplift at joint 24, 54 lb uplift at joint 25, 271 lb uplift at joint 26, 140 lb uplift at joint 21, 55 lb uplift at joint 19 and 263 lb uplift at joint 18.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



January 8, 2025

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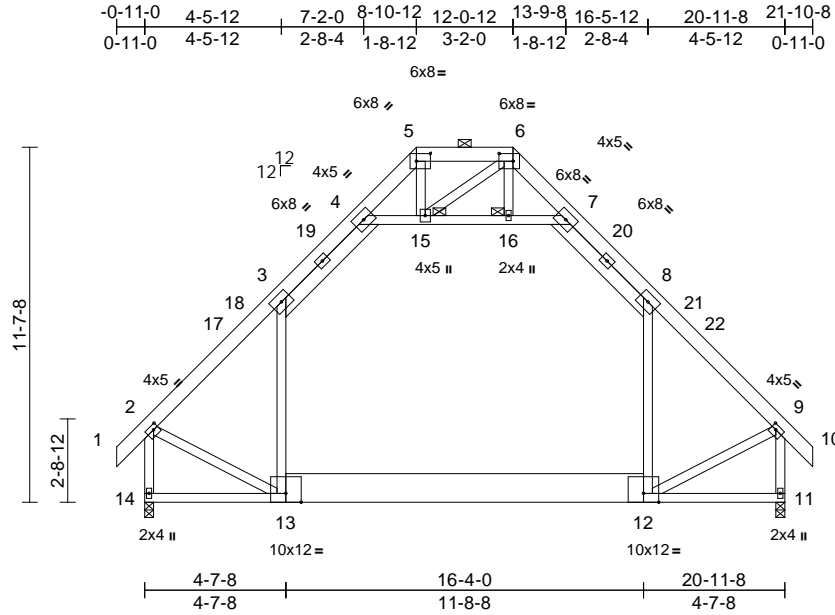
818 Soundside Road  
Edenton, NC 27932

|             |       |            |     |     |  |           |
|-------------|-------|------------|-----|-----|--|-----------|
| Job         | Truss | Truss Type | Qty | Ply | 126 Hidden Lakes North-Roof-Plan 9 GRH | I70597131 |
| 25010023-01 | B02   | Attic      | 9   | 1   | Job Reference (optional)               |           |

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Dec 5 2024 Print: 8.730 S Dec 5 2024 MiTek Industries, Inc. Tue Jan 07 17:06:51  
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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [5:0-5-8,0-3-0], [6:0-5-8,0-3-0], [9:0-2-0,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.73 | Vert(LL) | 0.16  | 13-14  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.43 | Vert(CT) | -0.21 | 12-13  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.34 | Horz(CT) | 0.00  | 11     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      | Attic    | -0.11 | 12-13  | >999 | 360    |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        | Weight: 223 lb | FT = 20% |

**LUMBER**  
 TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\* 13-12:2x12 SP 2400F 2.0E  
 WEBS 2x4 SP No.3 \*Except\* 4-7:2x4 SP No.2, 3-4,8-7:2x6 SP No.2

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 5-6-10 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 9-1-3 oc bracing.  
 JOINTS 1 Brace at Jt(s): 15, 16

**REACTIONS** (size) 11=0-3-8, 14=0-3-8  
 Max Horiz 14=315 (LC 12)  
 Max Grav 11=1461 (LC 48), 14=1461 (LC 48)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/45, 2-3=-1367/0, 3-4=-1009/134, 4-5=-357/103, 5-6=-185/248, 6-7=-360/98, 7-8=-1015/125, 8-9=-1356/8, 9-10=0/45, 2-14=-1556/4, 9-11=-1574/0  
 BOT CHORD 11-14=-318/876  
 WEBS 3-13=-98/473, 8-12=-97/473, 4-15=-1100/182, 15-16=-1096/180, 7-16=-1100/180, 2-13=-25/935, 9-12=-26/936, 5-15=-95/153, 6-16=-1/54, 6-15=-195/188

**NOTES**  
 1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-10-12, Exterior(2R) 5-10-12 to 15-0-12, Interior (1) 15-0-12 to 18-10-8, Exterior(2E) 18-10-8 to 21-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-15, 15-16, 7-16; Wall dead load (5.0psf) on member (s).3-13, 8-12
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 12-13
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



January 8, 2025

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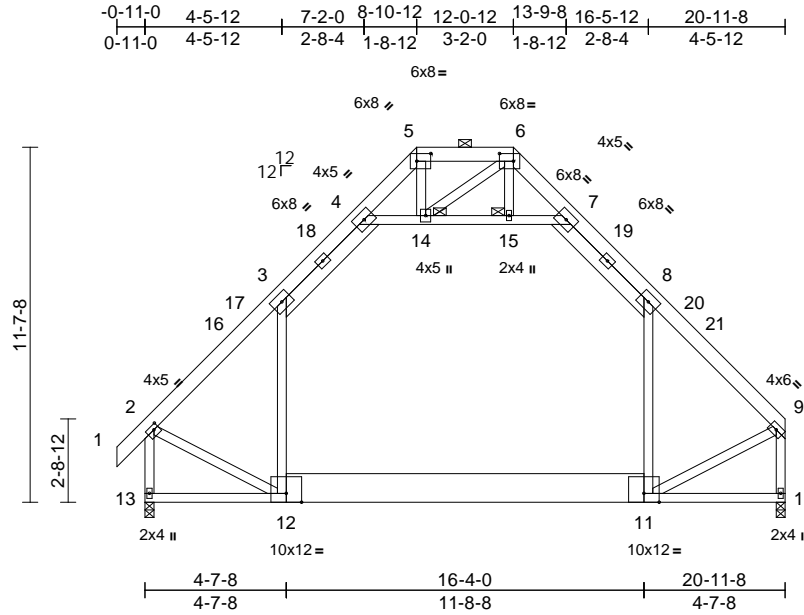
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

|                    |              |                     |          |          |  |           |
|--------------------|--------------|---------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>B03 | Truss Type<br>Attic | Qty<br>4 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597132 |
|--------------------|--------------|---------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:75.4

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [5:0-5-8,0-3-0], [6:0-5-8,0-3-0]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.72 | Vert(LL) | 0.16  | 12-13  | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.42 | Vert(CT) | -0.21 | 11-12  | >999 | 180    |                |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.33 | Horz(CT) | 0.00  | 10     | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      | Attic    | -0.11 | 11-12  | >999 | 360    |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        | Weight: 220 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x4 SP No.2 \*Except\* 12-11:2x12 SP 2400F 2.0E  
 WEBS 2x4 SP No.3 \*Except\* 4-7:2x4 SP No.2, 3-4,8-7:2x6 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-8-2 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.  
 BOT CHORD Rigid ceiling directly applied or 9-4-10 oc bracing.  
 JOINTS 1 Brace at Jt(s): 14, 15

**REACTIONS**

(size) 10=0-3-8, 13=0-3-8  
 Max Horiz 13=297 (LC 11)  
 Max Grav 10=1363 (LC 48), 13=1417 (LC 48)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/44, 2-3=-1327/0, 3-4=-981/125, 4-5=-344/101, 5-6=-177/245, 6-7=-346/96, 7-8=-985/120, 8-9=-1314/0, 2-13=-1511/0, 9-10=-1482/0  
 BOT CHORD 10-13=-304/841  
 WEBS 3-12=-94/458, 8-11=-98/455, 4-14=-1074/171, 14-15=-1068/173, 7-15=-1072/173, 2-12=-22/909, 9-11=-29/898, 5-14=-91/148, 6-15=-1/53, 6-14=-188/180

**NOTES**

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 2-1-0, Interior (1) 2-1-0 to 5-10-12, Exterior(2R) 5-10-12 to 15-0-12, Interior (1) 15-0-12 to 17-9-12, Exterior(2E) 17-9-12 to 20-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Ceiling dead load (5.0 psf) on member(s). 3-4, 7-8, 4-14, 14-15, 7-15; Wall dead load (5.0psf) on member (s).3-12, 8-11
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 11-12
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

LOAD CASE(S) Standard



January 8, 2025

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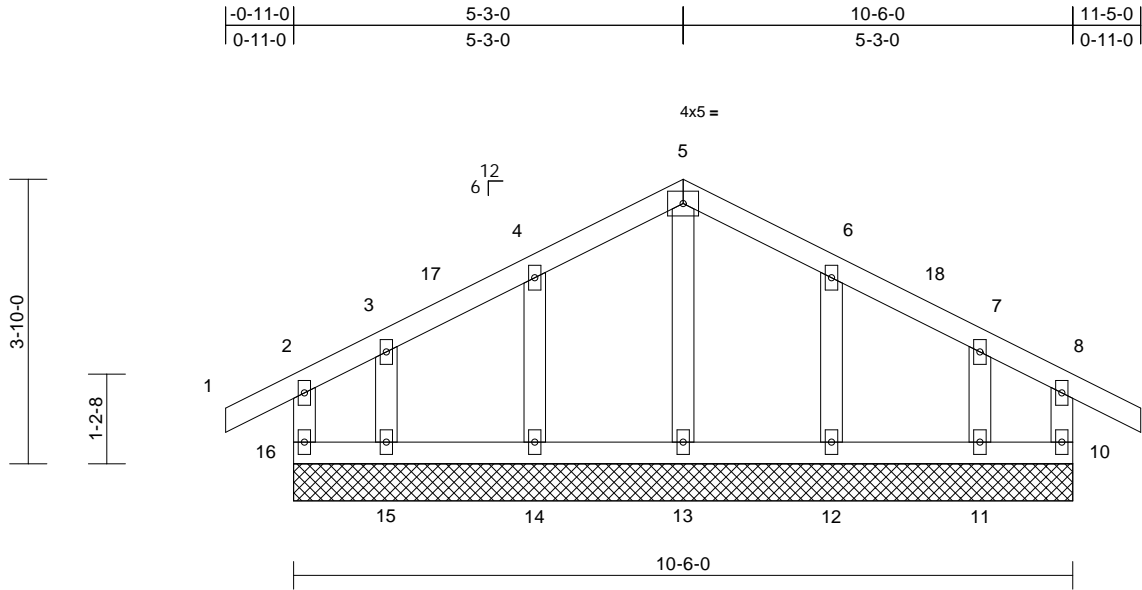
818 Soundside Road  
 Edenton, NC 27932

|                    |              |                                      |          |          |  |           |
|--------------------|--------------|--------------------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>C01 | Truss Type<br>Common Supported Gable | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597133 |
|--------------------|--------------|--------------------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:31.1

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.11 | Vert(LL) | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.03 | Vert(CT) | n/a   | -      | n/a | 999    |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.05 | Horz(CT) | 0.00  | 10     | n/a | n/a    |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MR |      |          |       |        |     |        |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     |        |               |          |
|             |       |                 |                 |           |      |          |       |        |     |        | Weight: 54 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6'-0" oc bracing.

**REACTIONS** (size)  
10=10-6-0, 11=10-6-0, 12=10-6-0, 13=10-6-0, 14=10-6-0, 15=10-6-0, 16=10-6-0  
Max Horiz 16=67 (LC 13)  
Max Uplift 10=-39 (LC 11), 11=-47 (LC 15), 12=-45 (LC 15), 14=-45 (LC 14), 15=-49 (LC 14), 16=-45 (LC 10)  
Max Grav 10=123 (LC 22), 11=160 (LC 22), 12=248 (LC 22), 13=153 (LC 22), 14=248 (LC 21), 15=160 (LC 21), 16=123 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/28, 2-3=-25/48, 3-4=-30/93, 4-5=-42/164, 5-6=-42/164, 6-7=-30/94, 7-8=-19/41, 8-9=0/28, 2-16=-116/129, 8-10=-116/113  
BOT CHORD 15-16=-34/67, 14-15=-34/67, 13-14=-34/67, 12-13=-34/67, 11-12=-34/67, 10-11=-34/67  
WEBS 5-13=-115/0, 4-14=-208/134, 3-15=-128/78, 6-12=-208/132, 7-11=-128/95

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 2-1-0, Corner(3R) 2-1-0 to 8-5-0, Corner(3E) 8-5-0 to 11-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 16, 39 lb uplift at joint 10, 45 lb uplift at joint 14, 49 lb uplift at joint 15, 45 lb uplift at joint 12 and 47 lb uplift at joint 11.

**LOAD CASE(S)** Standard



January 8, 2025

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

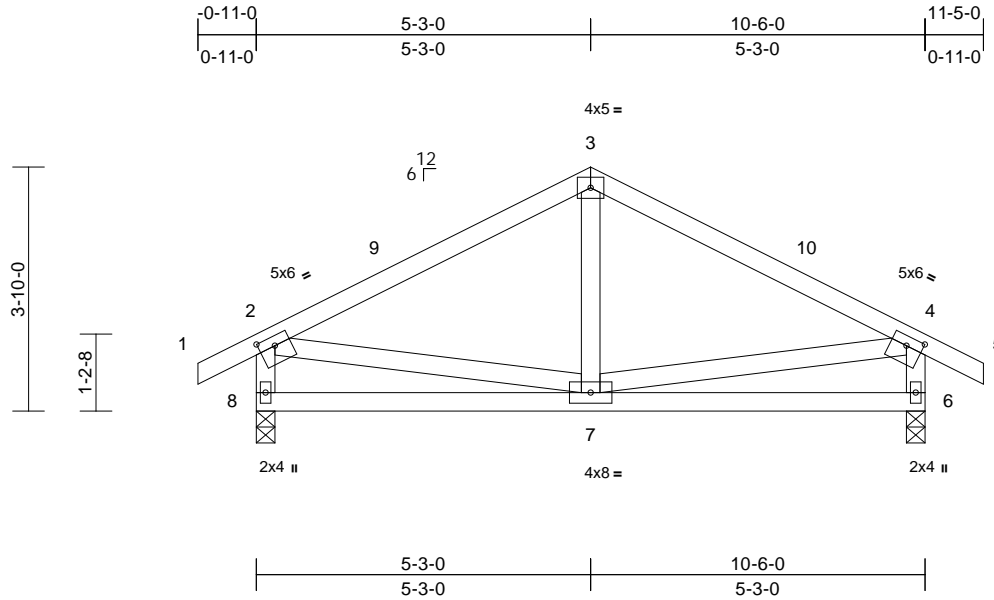
818 Soundside Road  
Edenton, NC 27932

|                    |              |                      |          |          |  |           |
|--------------------|--------------|----------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>C02 | Truss Type<br>Common | Qty<br>4 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597134 |
|--------------------|--------------|----------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:36.2  
Plate Offsets (X, Y): [2:0-3-0,0-1-12], [4:0-3-0,0-1-12]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.67 | Vert(LL) | -0.01 | 6-7    | >999 | 240    | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.23 | Vert(CT) | -0.03 | 6-7    | >999 | 180    |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB         | 0.11 | Horz(CT) | 0.00  | 6      | n/a  | n/a    |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |               |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |               |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 58 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

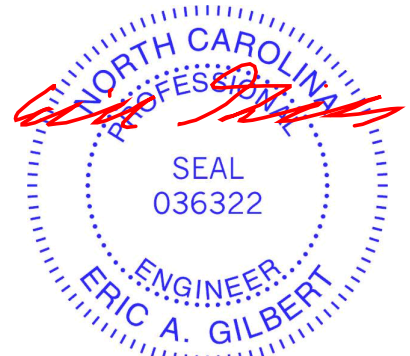
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

**REACTIONS** (size) 6=0-3-8, 8=0-3-8  
Max Horiz 8=69 (LC 13)  
Max Uplift 6=-58 (LC 15), 8=-58 (LC 14)  
Max Grav 6=574 (LC 22), 8=574 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/29, 2-3=-499/196, 3-4=-499/196,  
4-5=0/29, 2-8=-527/254, 4-6=-527/248  
BOT CHORD 7-8=-74/214, 6-7=-61/214  
WEBS 3-7=0/163, 2-7=0/276, 4-7=0/276

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-0 to 2-1-0, Exterior(2R) 2-1-0 to 8-5-0, Exterior(2E) 8-5-0 to 11-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.



January 8, 2025

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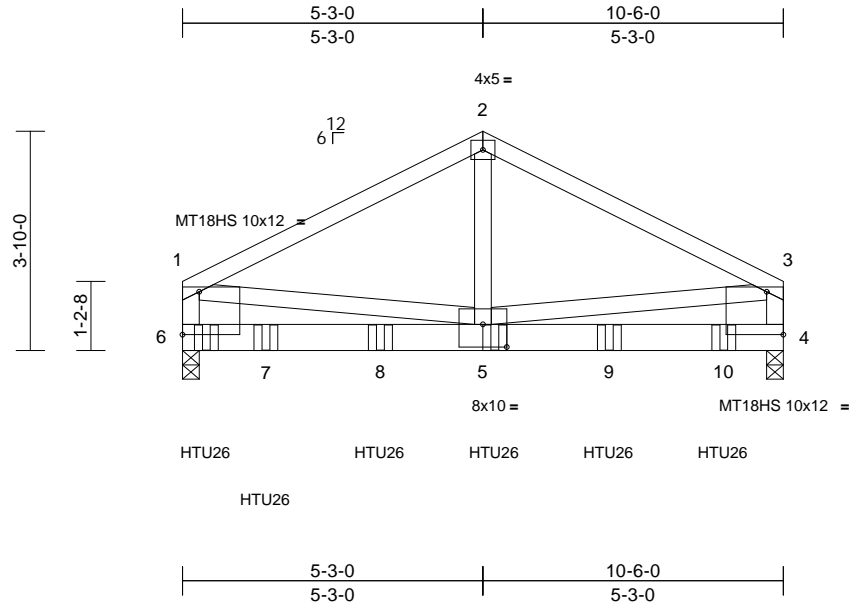


|                    |                |                             |          |          |  |           |
|--------------------|----------------|-----------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>C03-2 | Truss Type<br>Common Girder | Qty<br>1 | Ply<br>2 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597135 |
|--------------------|----------------|-----------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:40.3

Plate Offsets (X, Y): [1:Edge,0-9-0], [4:Edge,0-9-0], [5:0-5-0,0-4-12]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI        | DEFL | in       | (loc) | l/defl | L/d  | PLATES | GRIP           |          |
|-------------|-------|-----------------|-----------------|------------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC         | 0.75 | Vert(LL) | -0.06 | 5-6    | >999 | 240    | MT20           | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC         | 0.93 | Vert(CT) | -0.11 | 5-6    | >999 | 180    | MT18HS         | 244/190  |
| TCDL        | 10.0  | Rep Stress Incr | NO              | WB         | 0.67 | Horz(CT) | 0.00  | 4      | n/a  | n/a    |                |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MSH |      |          |       |        |      |        |                |          |
| BCDL        | 10.0  |                 |                 |            |      |          |       |        |      |        |                |          |
|             |       |                 |                 |            |      |          |       |        |      |        | Weight: 126 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 6-1,4-3:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 5-9-15 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 4=0-3-8, 6=0-3-8  
 Max Horiz 6=-58 (LC 8)  
 Max Uplift 4=-268 (LC 13), 6=-453 (LC 12)  
 Max Grav 4=3967 (LC 6), 6=5459 (LC 5)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=-3968/283, 2-3=-3968/283,  
 1-6=-2397/191, 3-4=-2404/192  
 BOT CHORD 5-6=-107/861, 4-5=-92/820  
 WEBS 2-5=-157/3234, 1-5=-157/2731,  
 3-5=-159/2772

**NOTES**

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 2-5 2x4 - 2 rows staggered at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

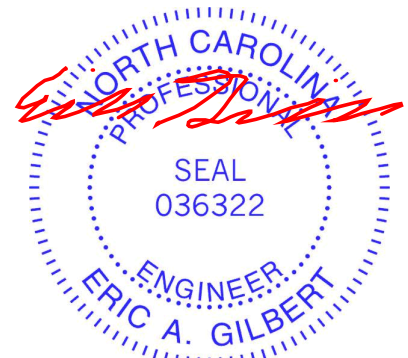
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 4. This connection is for uplift only and does not consider lateral forces.
- Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-5-0 from the left end to 9-5-8 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1817 lb down and 199 lb up at 0-1-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (lb/ft)  
 Vert: 1-2=-58, 2-3=-58, 4-6=-19

Concentrated Loads (lb)

Vert: 6=-1584 (B), 5=-1291 (B), 7=-1291 (B),  
 8=-1291 (B), 9=-1291 (B), 10=-1268 (B)



January 8, 2025

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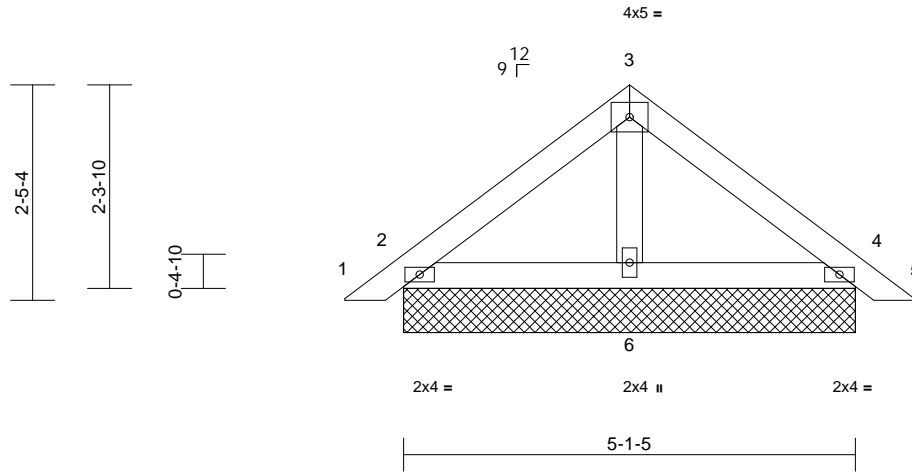
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|--------------------|---------------|-------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>PB01 | Truss Type<br>Piggyback | Qty<br>2 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597136 |
|--------------------|---------------|-------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1

|        |        |        |       |
|--------|--------|--------|-------|
| -0-8-0 | 2-6-11 | 5-1-5  | 5-9-5 |
| 0-8-0  | 2-6-11 | 2-6-11 | 0-8-0 |



Scale = 1:26.1

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       |      | DEFL     | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.11 | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.12 | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.01 | Horz(CT) | 0.00 | 2     | n/a    | n/a |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |      |       |        |     |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |      |       |        |     | Weight: 22 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=5-1-5, 4=5-1-5, 6=5-1-5  
Max Horiz 2=51 (LC 13)  
Max Uplift 2=-26 (LC 14), 4=-32 (LC 15)  
Max Grav 2=199 (LC 21), 4=199 (LC 22), 6=172 (LC 21)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

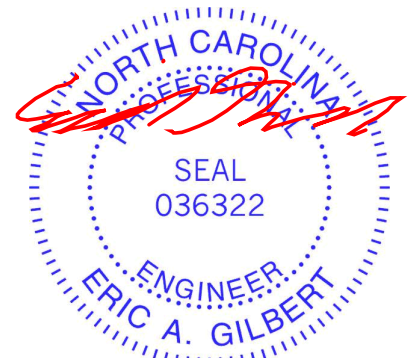
TOP CHORD 1-2=0/24, 2-3=-108/72, 3-4=-108/72, 4-5=0/24  
BOT CHORD 2-6=-13/45, 4-6=-5/45  
WEBS 3-6=-71/6

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 8, 2025

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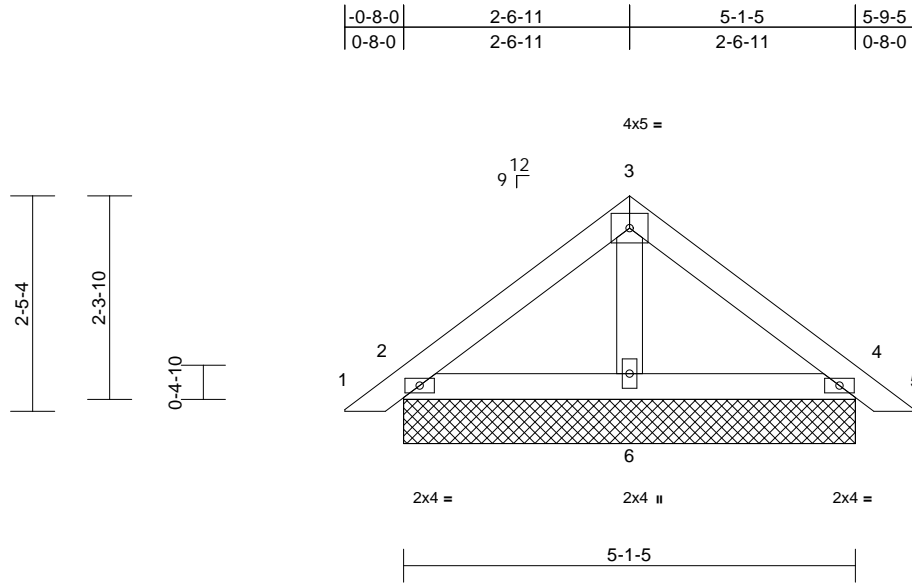
818 Soundside Road  
Edenton, NC 27932

|                    |               |                         |           |          |  |           |
|--------------------|---------------|-------------------------|-----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>PB02 | Truss Type<br>Piggyback | Qty<br>25 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597137 |
|--------------------|---------------|-------------------------|-----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.11 | Vert(LL) | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.12 | Vert(CT) | n/a   | -      | n/a | 999    |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.02 | Horz(CT) | 0.00  | 2      | n/a | n/a    |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |       |        |     |        |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     |        | Weight: 22 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=5-1-5, 4=5-1-5, 6=5-1-5  
Max Horiz 2=53 (LC 13)  
Max Uplift 2=-26 (LC 14), 4=-33 (LC 15)  
Max Grav 2=205 (LC 21), 4=205 (LC 22), 6=178 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-3=-112/74, 3-4=-112/74, 4-5=0/25  
BOT CHORD 2-6=-14/47, 4-6=-5/47  
WEBS 3-6=-73/6

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

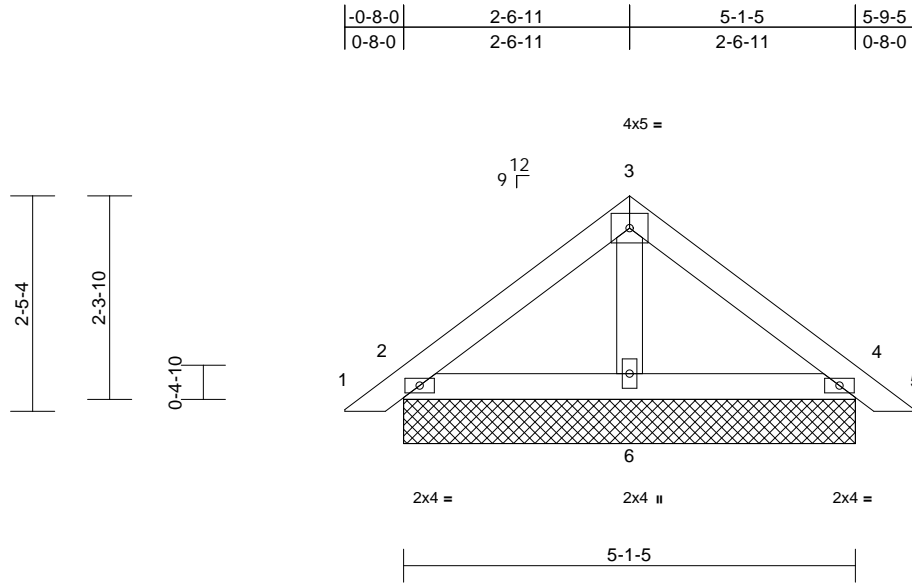
818 Soundside Road  
Edenton, NC 27932

|                    |               |                         |          |          |  |           |
|--------------------|---------------|-------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>PB03 | Truss Type<br>Piggyback | Qty<br>2 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597138 |
|--------------------|---------------|-------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.11 | n/a      | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.12 | Vert(CT) | n/a   | -      | 999 |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.02 | Horz(CT) | 0.00  | 2      | n/a |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |       |        |     |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     | Weight: 22 lb | FT = 20% |

**LUMBER**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
OTHERS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=5-1-5, 4=5-1-5, 6=5-1-5  
Max Horiz 2=53 (LC 13)  
Max Uplift 2=-26 (LC 14), 4=-33 (LC 15)  
Max Grav 2=205 (LC 21), 4=205 (LC 22), 6=178 (LC 21)

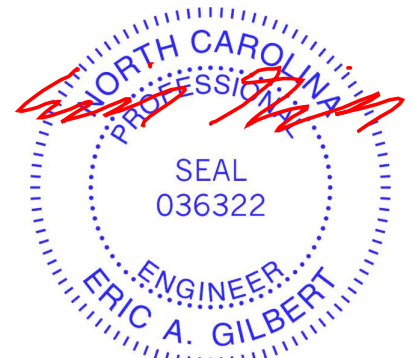
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-3=-112/74, 3-4=-112/74, 4-5=0/25  
BOT CHORD 2-6=-14/47, 4-6=-5/47  
WEBS 3-6=-73/6

- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



January 8, 2025

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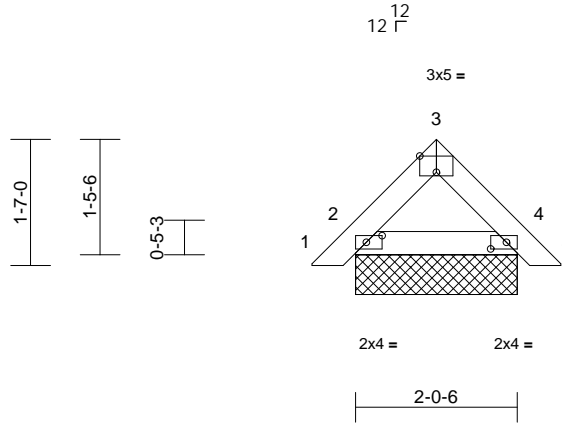
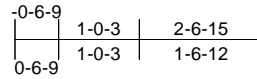
|             |       |            |     |     |  |           |
|-------------|-------|------------|-----|-----|--|-----------|
| Job         | Truss | Truss Type | Qty | Ply | 126 Hidden Lakes North-Roof-Plan 9 GRH | 170597139 |
| 25010023-01 | PB04  | Piggyback  | 13  | 1   | Job Reference (optional)               |           |

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Plate Offsets (X, Y): [2:0-2-6,0-1-0], [3:0-2-8,Edge], [4:0-2-6,0-1-0]

| Loading     | (psf) | Spacing         | 2-0-0           | CSI       | DEFL | in       | (loc) | l/defl | L/d | PLATES | GRIP          |          |
|-------------|-------|-----------------|-----------------|-----------|------|----------|-------|--------|-----|--------|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.02 | Vert(LL) | n/a   | -      | n/a | 999    | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.02 | Vert(CT) | n/a   | -      | n/a | 999    |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.00 | Horz(CT) | 0.00  | 4      | n/a | n/a    |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |          |       |        |     |        |               |          |
| BCDL        | 10.0  |                 |                 |           |      |          |       |        |     |        | Weight: 10 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-2-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=2-0-6, 4=2-0-6  
 Max Horiz 2=-32 (LC 12)  
 Max Uplift 2=-12 (LC 14), 4=-12 (LC 15)  
 Max Grav 2=126 (LC 21), 4=126 (LC 22)

**FORCES**

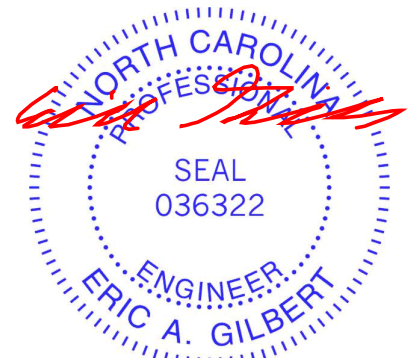
(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/22, 2-3=-58/39, 3-4=-58/39, 4-5=0/22  
 BOT CHORD 2-4=-6/54

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 8, 2025

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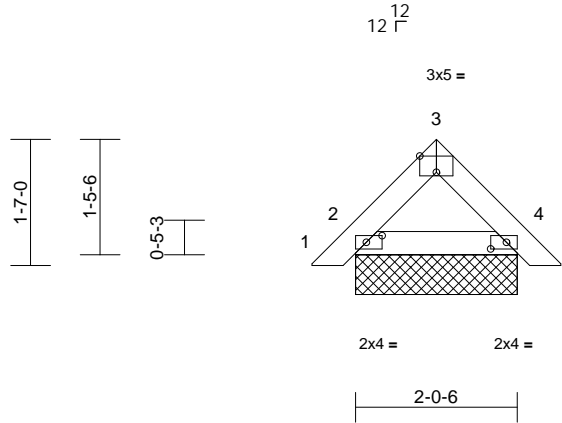
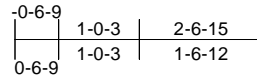
818 Soundside Road  
 Edenton, NC 27932

|                    |               |                         |          |          |  |           |
|--------------------|---------------|-------------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>PB05 | Truss Type<br>Piggyback | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597140 |
|--------------------|---------------|-------------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:28.9

Plate Offsets (X, Y): [2:0-2-6,0-1-0], [3:0-2-8,Edge], [4:0-2-6,0-1-0]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL     | in   | (loc) | l/defl | L/d | PLATES        | GRIP     |
|-------------|-------|-----------------|-----------------|-----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | Vert(LL) | n/a  | -     | n/a    | 999 | MT20          | 244/190  |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | Vert(CT) | n/a  | -     | n/a    | 999 |               |          |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | Horz(CT) | 0.00 | 4     | n/a    | n/a |               |          |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |          |      |       |        |     |               |          |
| BCDL        | 10.0  |                 |                 |           |          |      |       |        |     | Weight: 10 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-2-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(size) 2=2-0-6, 4=2-0-6  
Max Horiz 2=31 (LC 13)  
Max Uplift 2=-11 (LC 14), 4=-11 (LC 15)  
Max Grav 2=122 (LC 21), 4=122 (LC 22)

**FORCES**

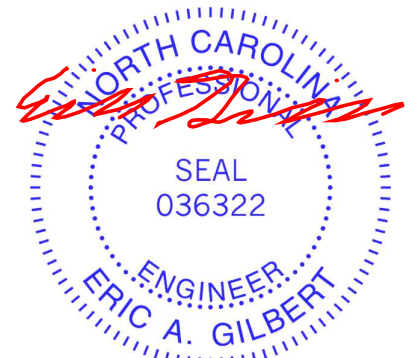
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/21, 2-3=-56/38, 3-4=-56/38, 4-5=0/21  
BOT CHORD 2-4=-6/52

**NOTES**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



January 8, 2025

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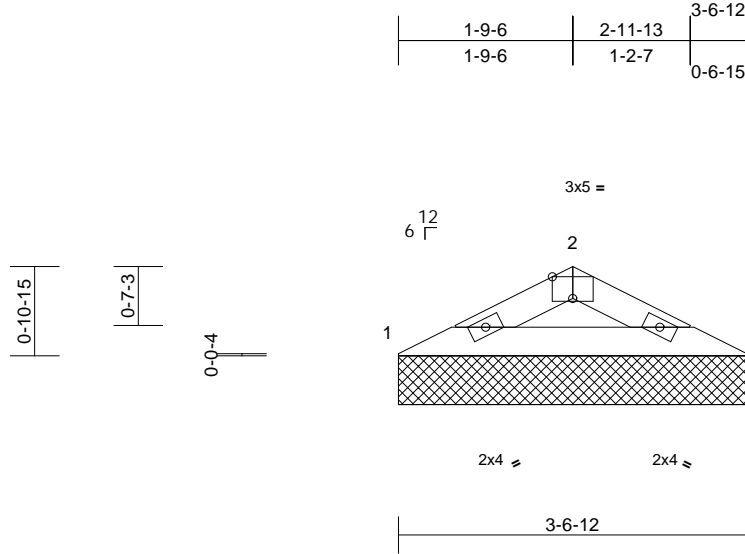
818 Soundside Road  
Edenton, NC 27932

|                    |              |                      |          |          |  |           |
|--------------------|--------------|----------------------|----------|----------|--|-----------|
| Job<br>25010023-01 | Truss<br>V03 | Truss Type<br>Valley | Qty<br>1 | Ply<br>1 | 126 Hidden Lakes North-Roof-Plan 9 GRH<br>Job Reference (optional) | 170597141 |
|--------------------|--------------|----------------------|----------|----------|--|-----------|

Carter Components (Sanford, NC), Sanford, NC - 27332,

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Page: 1



Scale = 1:23.6

Plate Offsets (X, Y): [2:0-2-8,Edge]

| Loading     | (psf) | Spacing         | 1-11-4          | CSI       | DEFL | in        | (loc) | l/defl | L/d | PLATES       | GRIP     |         |
|-------------|-------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------------|----------|---------|
| TCLL (roof) | 20.0  | Plate Grip DOL  | 1.15            | TC        | 0.09 | Vert(LL)  | n/a   | -      | n/a | 999          | MT20     | 244/190 |
| Snow (Pf)   | 20.0  | Lumber DOL      | 1.15            | BC        | 0.10 | Vert(TL)  | n/a   | -      | n/a | 999          |          |         |
| TCDL        | 10.0  | Rep Stress Incr | YES             | WB        | 0.00 | Horiz(TL) | 0.00  | 3      | n/a | n/a          |          |         |
| BCLL        | 0.0*  | Code            | IRC2021/TPI2014 | Matrix-MP |      |           |       |        |     |              |          |         |
| BCDL        | 10.0  |                 |                 |           |      |           |       |        |     |              |          |         |
|             |       |                 |                 |           |      |           |       |        |     | Weight: 9 lb | FT = 20% |         |

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=3-6-12, 3=3-6-12  
Max Horiz 1=-11 (LC 19)  
Max Uplift 1=-14 (LC 14), 3=-14 (LC 15)  
Max Grav 1=154 (LC 20), 3=154 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

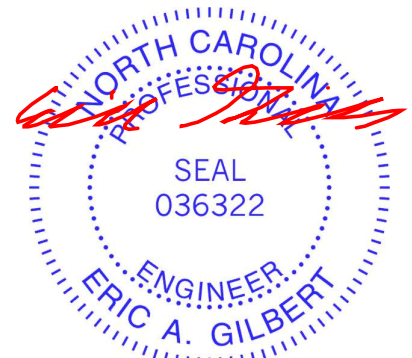
TOP CHORD 1-2=-258/114, 2-3=-258/114  
BOT CHORD 1-3=-89/222

#### NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.

- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 14 lb uplift at joint 3.

LOAD CASE(S) Standard



January 8, 2025

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

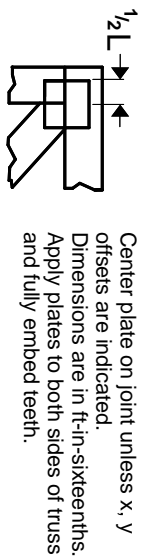
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Component Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))

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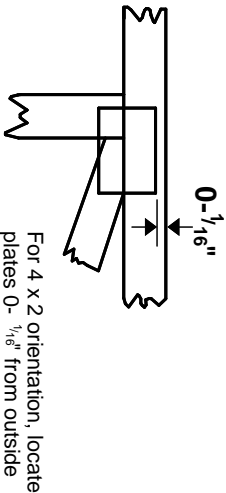
818 Soundside Road  
Edenton, NC 27932

# Symbols

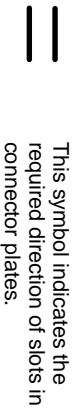
## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16\" from outside edge of truss.



\* Plate location details available in MITek software or upon request.

## PLATE SIZE

4 X 4

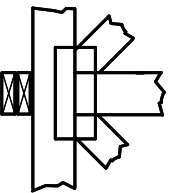
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

## BEARING

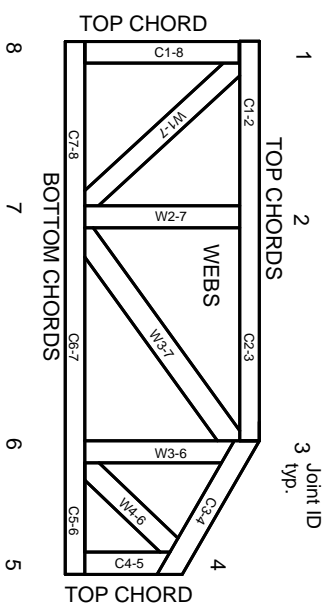


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-22: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

# Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

# Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.